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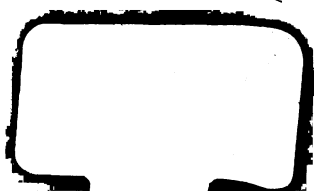
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# THE AMERICAN ANTIQUARIAN.

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## ANTIQUITY OF THE TOBACCO-PIPE IN EUROPE.

BY EDWIN A. BARBER.

### PART I.—GREAT BRITAIN.

IT has for some time been a matter of dispute amongst antiquaries whether the custom of tobacco-smoking originated in the Eastern or the Western continent; but of late years America has been generally accepted as the birth-place of the art. The discovery, however, of large numbers of pipes, apparently of considerable age, in Great Britain and various parts of the Continent, has recently given rise to new and extravagant conjectures as to the antiquity of the tobacco-pipe in Europe, and a certain class of archæologists have arrived at the conclusion that the luxury of the pipe was known to the inhabitants of the Old World, long before the discovery of the New. Tobacco-pipes of clay, exceedingly diminutive in size, have been found in great numbers in the British Islands. In England these are popularly termed "Fairy Pipes;" in Scotland they are known as "Celtic" or "Elfin Pipes," whilst in Ireland they are called by the peasantry "Dane's Pipes." They are also designated in different parts of the kingdom by the names of "Mab Pipes," "Old Man's Pipes" and "Carl's Pipes." Irish legends attribute them to the *Cluricawnes*, or fairy dwarfs, and in certain localities where pipes are particularly abundant, these mischievous little men are believed to have used them in smoking on festive occasions. The fact that a number of them have been discovered in close proximity to Roman remains has induced the belief that they are Roman relics of the second century, yet other objects of un-

doubted recent origin, such as coins and tobacco-stoppers of the period of George II. have been found in connection with these early remains. At a meeting of the Scottish Antiquaries, Dr. Daniel Wilson, of Toronto, called attention, some years ago, to a number of these small nicotian relics, which were exhumed at Bonnington, near Edinburgh, in digging the foundation of a new school house. "Along with these were found a quantity of bodles or placks of James VI., which he exhibited with the pipes, and at the same time expressed his belief that they probably supplied a very trustworthy clue to the date of this somewhat curious class of minor antiquities."<sup>1</sup>

These pipes are made of white clay, and in shape resemble those of modern times. See Wilson's *Prehistoric Man*, vol. II, p. 42. The ornamentation is incised, and, in the majority of examples, consists simply of a milled border around the mouth of the bowl, impressed by hand. Small clay pipes "have been dredged in numbers from the bed of the Thames, found in abundance on various sites in England and Ireland, where the soldiers of the Parliament and Revolution encamped; and in Scotland in divers localities, from the Border northward even to the Orkneys. They have been repeatedly met with in old churchyards, and turned up in places of public resort. Occasionally, too, to the bewilderment of the antiquary, they are discovered in strange propinquity to primitive, Roman, and mediæval relics; but in a sufficient number of cases with such potters' stamps on them as suffice to assign these also to the sixteenth and seventeenth centuries."<sup>2</sup>

"One example in the possession of Mr. C. K. Sharpe, found at a depth of many feet on the Castlehill of Edinburgh, bears the impress of the initials T<sup>E</sup><sub>L</sub><sup>B</sup>; and of upwards of seventy specimens in the collection of Mr. Bell, of Dunganon, some are stamped R D, and on others are the letters G A, CL, o<sup>o</sup>Ho, and I P."<sup>3</sup> Fairholt, in his excellent little work,<sup>4</sup> observes, "such are the pipes which have been found in close contiguity with Roman<sup>5</sup> relics, and have occasionally puzzled persons to know the period they should assign to their fabrication. Some of the Low Country Antiquaries have boldly termed them Roman, and as the demand now-a-days for 'curiosities' is always met by a full supply, pipes have been fabricated in red clay to imitate the so-called Samian pottery, so abundant in Roman localities, and offered to such 'collectors' as may wish for them." The same writer, after accounting for the presence of modern articles

1 Proceedings of the Scottish Antiquaries, 1853, Vol. I., p. 182.

2 Wilson's *Prehistoric Man*, Vol. II., p. 48.

3 *Archæology and Prehistoric Annals of Scotland*, by D. Wilson, Edinburgh, 1851, p. 680.

4 *Tobacco: Its History and Associations*, p. 165.

5 See *New Stat. Account of Scotland*, Vol. IV. p. 71, V. 490, and VI. p. 581.

amongst the ancient, thus concludes: "We may be certain that no authenticated discovery of Celtic or Roman antiquities, where the ground has been entirely undisturbed, includes tobacco-pipes."<sup>6</sup> A writer in the *Dublin Penny Magazine* assigns these pipes to the earlier years of Queen Elizabeth's reign, and traces them down to the reign of King Charles II., by the increasing dimensions of the bowls.<sup>7</sup>

In many localities, in and around London, where the victims of the great plague of 1665 are supposed to have been buried, large numbers of these diminutive pipes have been found, which were, in all probability, used in smoking tobacco and other herbs, as disinfectants.

It is related that those who were in the habit of smoking tobacco, were notably exempt from disease. In accordance with this idea, Pepy, writing in his diary, under date of June 7, 1665, observes: "This day, much against my will, I did, in Drury Lane, see two or three houses marked with a red cross upon the doors, and 'Lord have mercy upon us!' writ there; which was a sad sight to me, being the first of the kind that, to my remembrance, I ever saw. It put me in an ill conception of myself and my smell, so that I was forced to buy some roll-tobacco, to smell to, and chaw, which took away my apprehension."<sup>8</sup>

The "Fairy Pipes" of Ireland illustrate probably the most ancient form of tobacco-pipe found in the British Islands.

"The early period at which tobacco-pipes were first manufactured, is established by the fact that the incorporation of the craft of tobacco-pipe makers took place on the fifth of October, 1619. 'Their privileges extending through the cities of London and Westminster, the kingdom of England and dominion of Wales. They have a Master, four Wardens, and about twenty-four Assistants. They were first incorporated by King James, in his seventeenth year, confirmed again by King Charles I., and lastly, on the twenty-ninth of April, in the fifteenth year of King Charles II., in all the privileges of their aforesaid charter.'"<sup>9</sup>

Some of the earliest so-called "Elfin" or "Fairy Pipes" that have been discovered, have stamped upon them the names or marks of their makers. For nearly three centuries Broseley has been one of the principal seats for the manufacture of pipes. It is difficult to assign positive dates to all of them, but the oldest are supposed to have been made during the reign of Queen Elizabeth. Many of these have the stamps impressed on the base of the flat-heel, and some of them possess the dates of their fabrication. At Newcastle-under-Lyme, Charles Riggs was a

<sup>6</sup> *New Stat. Account of Scotland*, p. 154.

<sup>7</sup> *Vide Dublin Penny Magazine*, Vol. III., p. 29.

<sup>8</sup> *Pepy's Diary*, Fourth Ed., Vol. II., p. 243.

<sup>9</sup> Quoted by Fairholt from *Strype's Edition of Stone*, Vol. I., p. 247.

noted manufacturer in the seventeenth century. Plot, writing in the year 1676, observed, "As for *tobacco-pipe clays*, they are found all over the country, near Wrottesley House, and Stile Cop, in Cannock Wood, whereof they make pipes at Armitage and Lichfield, both which, though they are *greyish clays*, yet burn very white. There is *tobacco-pipe clay* also found at Darlaston, near Wednesbury; but of late disused, because of better and cheaper found in Monway-field, betwixt Wednesbury and Willingsworth, which is of a *whitish color*, and makes excellent *pipes*, as doth also another of the same color, dug near the Salt Water poole in Pensnet Chase, about a mile and a half south of Dudley. And Charles Riggs, of Newcastle, makes very good *pipes* of three sorts of clay—a *white* and *blew*—which he has from between Shelton and Hanley Green, whereof the blew clay burns the *whitest*, but not so *full* as the *white*—*i. e.*, it *shrinks* more; but the best sort he has is from Grubbers Ash, being *whitish* mixed with *yellow*. It is a short, brittle sort of clay, but burns full and white; yet he sometimes mixes it with the blew before mentioned."<sup>10</sup> This celebrated manufactory was founded over two hundred years ago.

In the reign of William III., the bowls of pipes were elongated. They were made in England to a great extent, but were also imported from Holland in considerable numbers. Mr. Jewitt,<sup>11</sup> quoting from Houghton (1694), observes: "The next are *tobacco-pipes*, of which came from *Holland*, gross one hundred and ten, chests four. I have seen some very long ones and also small from thence, that truly are very fine. If there comes no more, they'll do us no great hurt. I think they must be permitted to be patterns to set our people on work, and if our smoakers would use none but fine ones, I question not but we should make as fine as anybody." The long-bowled pipes of the time of William III. continued in use until the middle of the last century. During this period, pipes were also made of iron or brass, which probably came from Holland. Pipe-makers began to stamp their names on the *stems* of pipes about a century ago. It is, therefore, possible to classify the British pipes according to age, with some degree of certainty; First, by form: The earliest tobacco-pipes of the Elizabethan age were generally exceedingly small and usually ornamented by a single band of incised lines around the upper portion of the bowl. The heels or spurs were flat so that the pipes could stand unsupported. These were followed by the barrel-shaped pipes of larger dimensions, which gradually gave place to pipes with long handles and *pointed* spurs.

<sup>10</sup> Quoted by L. Jewitt, F. S. A., in "The Ceramic Art of Great Britain," London, 1878, Vol. I., p. 493.

<sup>11</sup> *Ib.* vol., II, p. 208.

Second, by the position of the stamps: The makers' initials, names or marks were impressed on the *heels* of the oldest specimens; on the *bowls* of more recent examples, and finally the names and residences were placed upon the *stems*.

Several of these "Fairy pipes" have found their way into collections in this country. An ancient Irish pipe in the collection of Dr. L. G. Olmstead, of Fort Edward, New York, is a good example of one of the older forms, and differs little from that figured by Dr. Wilson. It was presented to Dr. Olmstead by Mr. Rob't Day, Jr., of Cork, Ireland. Dr. Wilson, of Toronto, Canada, has a number of these interesting relics in his possession. The latter remarks of these: "The minute size of the most ancient of the British tobacco-pipes, which has led to their designation as those of the elves or fairies, may therefore be more certainly ascribed to the mode of using the tobacco, which rendered the contents of the smallest of them a sufficient dose, than to economic habits in those who indulged in the novel and costly luxury. This opinion is further confirmed by observing that the same miniature characteristics mark various specimens of antique native pipes of a peculiar class found in Canada, and which appear to be such as in all probability were in use, and furnished the models of the English clay pipes of the sixteenth century."<sup>12</sup>

A Scottish *stone* pipe, found at North-Berwick, is figured and described by Dr. Wilson, which is "cut in red sand-stone, somewhat after an American model, in the form of an animal's head, with a perforation at one of the eyes, seemingly for the insertion of a reed or straw, as was commonly done by the early English smoker with a walnut shell. It was found a few years since, in digging a drain, at the village of Morning-side, near Edinburgh, in a locality where numerous relics of Scottish prehistoric times have been dug up. (See pre-historic man, vol. II., p. 41.) To this unique example, may be further added the description of a curious old Scottish memorial of the luxury, which would seem at least to prove that we must trace the introduction of tobacco into this country to a date much nearer the discovery of the New World by Columbus than the era of Raleigh's colonization of Virginia. The grim old keep of Cawdor Castle, associated in defiance of chronology with King Duncan and Macbeth, is augmented, like the majority of such Scottish fortalices, by additions of the sixteenth century. In one of the apartments of this latter erection, is a stone chimney richly carved with armorial bearings, and the grotesque devices common on works of the period. Among these are a mermaid

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<sup>12</sup> Prehistoric Man, vol. II., p. 46.



playing the harp, a monkey blowing a horn, a cat playing a fiddle, and *a fox smoking a tobacco-pipe*.<sup>13</sup> There can be no mistake as to the meaning of the last lively representation, and on the same stone is the date 1510, the year in which the wing of the castle is ascertained to have been built, and in which it may be added Jamaica was settled by the Spaniards."<sup>14</sup>

English pipes of the seventeenth century, were doubtless brought to the United States by the early settlers and may have been furnished to the natives in trade. Two clay pipes of this period have recently been taken from an Indian grave<sup>15</sup> in Chester Co., Pennsylvania, with the initials R. T. stamped in the bowls. They were probably made by Richard Tyler, a celebrated pipe-maker in the vicinity of Bath, during the early or middle part of the seventeenth century.\* A moulded clay pipe-bowl, in the form of an Indian's head, surrounded by a feather head-dress, was taken from a grave in Lancaster County, Pennsylvania, a few years ago, and although of comparatively modern date, it was undoubtedly made in England, especially for traffic with the Indians.

"The *Albany Journal*, U. S., in 1858, speaks of the pipe of the famed Miles Standish, 'which came over with him in the Mayflower, and was smoked by him to the day of his death,' as 'a little iron affair of about the size and shape of a common clay pipe.'"<sup>16</sup> This was, in all likelihood, an early Dutch pipe, obtained from Holland.

"It may reasonably be inferred, from various circumstances," remarks Mr. Jewitt,<sup>17</sup> "that herbs and leaves, of one kind or other, were smoked medicinally, in this country, long before the period at which tobacco is generally believed to have been first brought to England. Coltsfoot, yarrow, mouse-ear, and other plants are still smoked by the people, for various ailments, in rural districts, and are considered highly efficacious, as well as pleasant; and I have known them smoked through a stick from which the pith had been removed, the bowl being formed of a lump of clay, rudely fashioned at the time, and baked at the fire-side. I have no doubt that pipes were in use before 'the weed' was known in our country, and that it took the place of other plants, but did not give rise to the custom of smoking."

King James, in his celebrated *Counterblaste to Tobacco*, in 1603, asserts that "It is not so long since the first entry of this

<sup>13</sup> See Carruthers' *Highland Note-Book*, p. 54.

<sup>14</sup> *Pre-historic Man*, vol. II., p. 42.

<sup>15</sup> See *Naturalist* for May, 1879.

\* Since the above was written, a further examination of these graves has been made, and in one of them two more English pipes have been found. The latter, however, differ in form from the others, the bowls being shorter and set almost perpendicular to the stems. They were doubtless made at a more recent period, and probably illustrate the form of clay pipe used during a portion of the last century.

<sup>16</sup> Quoted by Fairholt, p. 171.

<sup>17</sup> *Ceramic Art in Great Britain*, Vol. I., p. 201.

abuse amongst us here, as this present age can very well remember both the first author and forms of its introduction."

In the works of Shakspeare we find no allusion to the custom of tobacco-smoking; but Spenser, in his *Faery Queen* (1590), designates the plant "the soveraine weede, divine tobacco."<sup>18</sup>

Its introduction is variously ascribed to Sir Walter Raleigh, Mr. Ralph Lane (Governor of Virginia), Sir John Hawkins, Captain Price, Captain Keat, and others. According to Dr. Wilson, "the year 1560 is assigned for its introduction into France, and most commonly that of 1586—in which Admiral Drake's fleet returned from the attack on the West Indian Islands—for its reaching England." The probability is, that it was first brought to England by the first expedition of Raleigh, that discovered Virginia (1584), as two Indians were carried back by this expedition. King James, in his royal attack, alludes to this fact: "It was neither brought in by King, great conquerer, nor learned Doctor of Physic. With the report of a great discovery for a conquest, some two or three savage men were brought in, together with this savage custom."

As tobacco became generally known in England, the custom of smoking gave rise to a great number of publications for, and against, it. As early as the first part of the seventeenth century, the popular literature in reference to the nicotian art, formed a prominent portion of the bibliography of the day. Among many works which issued from the press about that time, we may mention a few which possessed such quaint titles as "*Tobacco battered; and the Pipes shattered About their Eares that idly Idolize so base and barbarous a Weed; or at least Wise over-love so loathsome Vanitie; by A Volley of holy Shot Thundered From Mount Helicon.*" This is supposed to have been written by the popular poet, Joshua Sylvester, and appeared about 1615 or 1620.

Tobias Venner, in 1621, issued "A Briefe and accurate Treatise, concerning, The taking of the fume of Tobacco, which very many in these dayes doe too licentiouslly vse. In which, the immoderate, irregular, an vnseasonable vse thereof is reprehended, and the true nature and best manner of vsing it perspicuously demonstrated." This was followed by "*Wine, Beere, Ale, and Tobacco: contending for Superiority.*" A Dialogue (1630). "*Panacea; or, The Universall Medicine, Being A Discovery of the Wonderful Vertues of Tobacco Taken in a Pipe. With its operation and Use both in Physick and Chyrurgery,*" by Dr. Everard (1659). And in 1723 a little volume was printed with the following highly descriptive title: "*How do you do*

*after your Oysters?* or A True and Lamentable Account how One and twenty Ingenious Gentlemen were set upon on Wednesday Morning last, about One o'clock and Listed, as it is thought, for the service of the Pretender, with many other Remarkable Discoveries. To which is added *Better than you after your Tobacco*; or a Full and True Account of One and twenty gentlemen who Listed in the Service of Robert Marrall, Knt. on the 11th of April, on which day they got a Dangerous Surfeit of Tobacco, which they have never since recover'd."<sup>19</sup>

In the next number the subject will be concluded by a paper on the early pipes found upon the continent.

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## THE RELIGION OF THE CLALLAM AND TWANA INDIANS.

BY REV. M. EELLS.

THE religion of the Indians, at first sight, seems to be entirely different from anything else. Let a common white person go among them and for the first time hear the noise and see the incantations of some of their religious performances, and he would probably think that here was something new under the sun. To me at least it appeared so at first. But a more careful study of the whole subject has completely changed my opinion.

Religion may be divided into three parts, according to the objects of which it treats. These are: 1st. The Beings in the spirit world more powerful than ourselves, who are believed to have more or less influence over us, including the Creator, good angels, satan and evil spirits, and also various articles and places where these have been supposed to dwell, as the sun, idols, sticks, and the like. 2d. The man as a religious being, including his spirit, sinfulness and immortality. 3d. The relations between man and these Beings of the other world, in creation and providence, mode of worship, prayer, sacrifice, an incarnation, and a future state of happiness or woe. This division may be recognized among the religions of the aborigines. I propose to give some of the elements which I have discovered among the tribes of the Pacific coast, especially those dwelling in Washington Territory.

I. Their ideas of the Beings in the other world. (a) *The Great Spirit*.

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<sup>19</sup> See also "Bibliotheca Nicotiana," by Wm. Bragge, F. S. A., Sheffield, 1874 (Fifty copies printed).

The Indians of America are generally supposed to believe in a Great Spirit, but I have never been able to discover that these Indians have an idea of exactly such a Being, or of what the whites call God. They have, however, an idea of a Creator, whom the Twana and Nisqually Indians call *Di-kî-batl*, and the Clallams *Nu-kî-matl*; the difference between the names being simply that which is often seen between the languages; the Clallam being the more nasal. The meaning of the word is a Changer, and according to their traditions the name is appropriate. He was the Creator of the whole world, but their traditions of the creation are not exactly like ours. The Twanas believe that he resided in the south or west, at the place where the heaven comes down to the earth, for they believed the world to be flat, and the heavens concave, as they appear. The Clallams thought that the Sun was this being, or that he dwelt in the Sun. As far as I have been able to learn, however, all agree that he was the Creator, but their clearest traditions of him are of the time when he visited the world. There are two things in religion of which the Indians are full: one is of the practice of incarnations to the spirits of the other world, often called *ta-mán-o-us*, which is the practical part of their religion, and the other is the coming of *Dokibatl* to this world, and of his work while here, which is the traditionary part of it. Whether or not this is a dim tradition of the incarnation of Christ is more than I can determine, but the Indians joined the two together as soon as they heard about Christ, and often in conversing with them about him they will call him Jesus. A long time after the creation, they say, the world became bad, so he determined to come here and rectify affairs, and in doing so, he changed many men into animals, stones and the like. The Clallams say that Protection Island, at the mouth of Port Discovery Bay was a part of the main land, and was a woman, while the main land was her husband. He became vexed at her and kicked her away, and when Nickimath came, he changed them into land as they now are. The mountain back of Freshwater Bay, nine miles west of Port Angeles was a woman, and Mt. Baker, in British Columbia, was her husband, while the large rock off the Cape at the western end of the bay was their daughter. The woman was bad and abused her husband severely, he bore it for a long time, but at last took his things, put them in a boat and crossed the sound. When Nukimatl came he changed them into what they now are.

Most of the other traditions which I have obtained have come from the Twanas. One man, knowing that *Dokibatl* was coming, sat down with his bone knife and began to whet it, saying, "I will kill him when he comes." Soon he came, but was so much like common men that at first the man did not know him. *Doki-*

batl said, "What are you doing?" "Nothing special," was the reply. Again the same question was asked, with the same answer. Then Dokibatl said, "I know what you have said; you want to kill me. Let me take your knife?" He did so, thrust it into the man's leg, and the man began to jump, and jumping away he became a deer.

Another person was pounding against a cedar tree, when Dokibatl came and asked him what he wished to do. The reply was to break or split the tree. Dokibatl said, "you may stop and go away, and I will help you." As the person went away, wings came to him, also a long bill and a strong head and he became a woodpecker.

Similar stories are told of the changing of men, boys, women and canoes into the beaver, turtle dove, animals, birds and stones; and several incidents in regard to his travels. His footsteps still remain, as they believe, in hard stone, on the west side of Hood's Canal, ten miles south of the Skokomish Agency. They are roughly in the shape of large foot-tracks, about two feet long, between high and low tide, and were evidently formed by the waves.

(b) *Good Spirits*. Their belief in these, is fully as wide-spread as that of a Supreme Being, and much more practical. Each individual has such a spirit, who watches over him or her during life.

In youth, each person went off alone and spent the time in washing, and starvation for several days, with a good fire, when at last the Spirit revealed itself in the shape of some animal, either a bird or beast, which was ever sacred to him. This animal was not the spirit, but the spirit dwelt in it. After this the Indian seeks the aid of this spirit by means of various incantations, as singing, pounding on sticks, pounding on a drum, the shaking of rattles, and making as much noise as possible, on somewhat the same principle that the Mohammedan or Christian prays. In traveling on the water they sometimes go through these performances to secure a favorable wind. In gambling they do so to obtain their aid so as to win the game. • When sick, it is the business of the good medicine man, with the aid of his spirit, which is supposed to be more powerful than those of ordinary individuals—having been secured in youth, by going through a more severe process—to drive away the evil spirit which causes the sickness. Often in winter they spend days and nights in these incantations to secure the general favor of the spirits of the future.

(c) *Demons*. They firmly believe in the power and presence of these, the chief of whom according to the Twanas, is Skwai-il, who resides below, but in another place from where the spirits of deceased human beings dwell. Often a parent told a child

"you must not steal or do wrong; if you do, Skwai-il will see you, and take you to his dwelling place." They were more afraid of the lesser imps, practically. When a person is severely sick, it is because a wicked medicine man sends one of these demons, in the shape of a woodpecker, bear, or treacherous animal to the heart of his enemy, to kill him. Sometimes several evil spirits are sent to the same person, and it is the duty of the good doctor to draw these out. At times, too, they say, that a special demon takes possession of a person, and that person, either man or woman, becomes crazy, whereupon there must be a grand gathering and series of incantations to drive away this spirit.

(d) *Sun*. I have never learned of any veneration of the Sun among the Twanas, but there are plain traces of it among the Clallams. One old Clallam man told me that before the coming of the whites they knew nothing of God, but worshiped the sun as their God, and that daily, they prayed to it, saying, "Sun, watch over me," and that they also gave food to it at noon. Another man of the same tribe told me that they formerly believed the sun and sky to be supreme, and that it was a common saying of the old one to their children, "you must not do wrong or the sky will see you." Such ideas, however, come to the surface very little in their intercourse with the whites, yet I think them to be true. A Makah Indian, in "Swan on the Makah's," who live next west of the Clallams, said, "Every night we wash and rub ourselves with cedar, and every morning talk to the great Chief or his representative, the Sun," while the following note is added by Hon. George Gibbs. "I have not detected any direct worship of the Sun among the western Selish or Flathead tribes, though he forms one of their mythological characters. According to Father Mangarini, he is, however, the principal object of worship among the Flatheads or Selish proper, as well as by the Blackfeet. Among both tribes he was supposed to be the creation of a Superior Being." Some of the Clallams held the belief, that the sun was the creator of the world, and that when Nukimatl came he was the Sun, incarnate. Others did not know who Nukimatl was, but believed it to be a woman. They did not know from whence she came or whither she went.

(e) *Inanimate Objects*. They also believe that these spirits, both good and bad may, and do at times dwell in certain sticks or stones, hence, these also become objects of reverence. These are generally made by the Indians, and given to the spirit. They are revered at all times, for although the spirit dwells in them only a small portion of the time, yet after it has once been given to it by the earthly owner, ever afterwards it is supposed to watch over the stick and be angry with any one who treats it disrespectfully. These generally, consist of some posts in a large house

which is sometimes used for festival purposes. They are usually only painted, but sometimes are carved, and occasionally both. They are not always, nor often dedicated with much ceremony as far as I know, but occasionally there is considerable. Often when the occasion is over for which these posts were especially constructed, they are not taken care of, and the weather beats upon them, but even then they are not to be abused. I have also seen two doors of dwellings, with figures painted on them, a head board to a bed, painted and slightly carved, a carved powder charge, a figured powder horn, and a cap with the feathers of the red-headed woodpecker sewed into it, all of which are supposed to contain the spirit of the guardian angel and to protect the owner when in his house or asleep, and to assist him when hunting and traveling.

(f) *Idols.* The sticks, posts and the like, just spoken of, have in them the principles of idolatry, yet none of them are carved or painted in the shape of an idol, but generally in some simple manner. I had been here three years and a half before I saw anything which could be properly called an idol. But, at one series of religious performances which lasted five days, the Twanas brought out a roughly carved image which might be called an idol. It was about four feet long, having the head of a man, both carved and painted, a neck, with a neck-tie and a slim body, but no legs or feet. The lower part was similar to a post, and was intended to be put in the ground, while the Indians performed around it. They say that it was made near a hundred years ago, and is usually kept secreted in the woods, and that the spirit which sometimes dwells in it, keeps it from decaying. I have since heard of others, both among the Twanas and Clallams, which are said to be kept in the woods, and to be so old as to be nearly decayed.

II. *Man as a Spiritual Being. His Spirit and Immortality.* They thoroughly believe that man has a spirit, that at death it is separated from the body, and that it is immortal. Every graveyard of the Indians shows this. Both in and around the graves are various articles, as muskets, canoes, clothes, dishes, fancy articles, and various articles of household furniture, and sometimes of religion. With those who are most esteemed, it is customary to place new articles every few years as these decay. It is the belief that as soon as a person dies, the spirit goes to the spirit land; that as the body decays, spirits from the other world come and carry it also away, and that as these articles decay, they to are carried by the same beings to the same place for the use of those who have died. They even believe that before a person dies a spirit from the other world may come and take away the spirit of a living person. If this is done, that person

is sure to die within a year. But, if by any means they can discover that this has been done, and there are those who profess by visions and dreams to be able to do so, they hold a grand religious service, go through a number of incantations in which they profess to break ground, so as to descend into the lower regions, travel along a road, and across a bridge in the spirit world, discover where the spirit of the living person is, fight with the spirits there, conquer them, bring up this spirit and return it to its owner.

The sinfulness of man will be spoken of under the following head.

### III. *Man's relation to the Supreme Being and other Spirits.*

(a) *What they do for Man.* Creation has been spoken of in connection with Dokibatl, and in the same connection a kind of Providence in which that Being, seeing that the affairs of the world were not in accordance with his ideas, changed them very thoroughly. The Spirits also mentioned are continually governing the people in this world, and the great part of their religious ceremonies is to influence those spirits. Their ideas of reward and punishment in this world are tolerably clear. A Spirit whose dwelling place, or stick has been injured, will probably send sickness upon the people. The whole idea of a flood, so widely prevalent in this region, and which was the subject of an article in a former number of the *ANTIQUARIAN*, is, that it was sent because of wickedness. In the next world their ideas are not so clear. The Spirit-world is situated somewhere within the earth; but all go there, except, perhaps, some very bad people. Their chief demon lives within the earth, in another place, and threats of his taking them are made, but I have never heard them say that he ever did take any one. The idea of punishment seems to be chiefly confined to this world.

(b.) *What man is to do towards the spirits.* Man as a favored being should thank them, and this was done in religious dances. As a weak being he should ask assistance. This is generally done by incantations, but sometimes by prayers. I have learned of a single Twana and Clallam prayer; each asked for protection, acknowledging the weakness of man, and the power of the Great Creator. But practically the most of their desires of this kind are expressed in incantations—called in this region *ta-mán-o-us*. As a sinful being he also needs to be made better, and by a series of incantations, to an outsider not very different from those performed when asking for assistance, this is usually sought. These consist mainly in pounding on sticks, on drums, clapping their hands, shaking of rattles made of deer hoofs, shells, and of hollowed wood in which are small stones, and in continually singing, these songs being often either a prayer for help or a desire for forgiveness. The only other implements used in these



performances of which I know, are headbands of cedar bark or cloth, and hand sticks, which are three or four feet long, but quite slim, and which are held in the hand during the performances. There is a kind of incantation called the black tamanous, in which the participants black their faces more or less, and which is the most savage performance of which I know. The candidate for admission is starved and treated roughly for several days, but it is a secret society, and as I am not one of the initiated, I have never been able to learn the principles. The medicine men, too, sometimes gather for a performance peculiar to themselves, but to this, as the last, whites are not admitted.

Sacrifices are occasionally offered, but they are not common. When formerly they went to a new land, they would build a fire and burn on it some fish, good mats, or something made with the hand, except clothes, in order, they said, to gain the good-will of the god of the land; and in their present ceremonies they do something somewhat similar, so that when I have tried to explain to them the sacrifices of the bible, I have found that they had already the idea in their minds.

Purification in a religious sense is important. One of the principal things which a young person does, when he first goes out to seek for his guardian spirit, is washing every day; and a medicine man once told me that in his youth he spent hours daily in the water, so that he should be suitable to receive a strong spirit to help him.

Except the medicine men, there is no separate class of persons for religious services. The main business of these is to cure sickness by their incantations, but in all other religious performances I am not aware that they are supposed to be any more powerful, or to take any more prominent part, than the other people. Occasionally women become doctors as well as men.

I have thus spoken of the religion of these two tribes, because my intercourse for nearly five years has been with them, but as far as I have been able to learn, the religion of the other tribes on Puget Sound, is very similar, the more northern tribes perhaps being a little more savage in some of their performances.

THE NATIONAL MUSEUM OF MEXICO AND THE  
SACRIFICIAL STONES.

*"Anales Del Museo Nacional."* (Tomo 1º, Nos. 1 to 4 inclusive. Nos. 1 and 2 of 1877; 3 and 4 of 1878.)

BY AD. F. BANDELIER, HIGHLAND, ILL.

Although it might be difficult of proof, the fact nevertheless may be admitted that the Chevalier Lorenzo Boturini-Benaducci has really been the unconscious originator of what has now grown into the "National Museum" of the City of Mexico. Forming, what he himself has called: "Museo Historico Indiano," consisting principally of manuscripts (both in Spanish and Mexican) written since the conquest, of aboriginal pictures and paintings, and (perhaps) of other "Indian relics." The unlucky Italian nobleman left this collection (well catalogued) in the hands of the Spanish Government of Mexico, and left that country in disgust. It is commonly admitted that the Spanish rulers of New Spain confiscated Boturini's collection, and such indeed appears to have been the case. A large portion of it perished since, through neglect. The archives of the vice-royalty had become depositaries of such remains, but in 1775 all antiquities and other "curiosities" were transferred to the University of Mexico.

This University had been founded in 1553. Its first Rector was Don Antonio Rodriguez de Quesada. Until 1775, 1162 degrees of Doctorship, and 29,882 baccalaureates were dispensed. In 1760 the Rector Don Mannel Ignacio Beye de Cisneros founded the Library which, open to the public morning and evening, under the care of two librarians, finally contained about 10,000 volumes, many of which of the highest value for aboriginal history. With Mexican Independence the decay of the University commenced. Closed in 1833, by order of President Farias, it was reopened by Santa Anna in 1834, though with considerable alterations in its statutes. The University witnessed such modifications again in 1843 and 1854, after each of which it was left in a worse condition, until finally, in 1857, the liberal President Comonfort closed it again. Re-established one year afterwards by Zuloaga, and reclosed by Juarez in 1861, it showed a faint spark of life in 1863, but the institution had suffered too much from the unstable condition of the country and the consequent neglect of studies, further maintenance was found impracticable, and the Emperor Maximilian was reluctantly compelled to abolish it on the 30th of November, 1865. Its valuable library was boxed up and stored away, its halls

now form the conservatory of music and elocution. Thus perished, a victim to continuous civil war, the third oldest (that of Lima is slightly older, and that of Santo Domingo was the first) high institute of learning in America.

In 1822 an archæological cabinet and one of natural history were opened in its halls, both of which were, in 1831, consolidated into the "National Museum." It was in the building of the University that Humboldt gazed at the gigantic carving purporting to be the idol "Teoyaomiquitzli." When Maximilian closed the University, the collections were transferred to their present rooms in the National Palace.

For the support of the "Museum," the Mexican Government, in 1867, voted monthly subsidies of five hundred dollars. The Museum is divided into two Sections or "Departmentos." The first one is the "Departemento de Arqueologia y Historia;" the other, "Departemento de Historia Natural," which in turn subdivides into the Sections of Botany, Zoology, Mineralogy, and Geology (Paleontology included).

Director of the "Museo" is Professor Don Gumesindo Mendoza. He is also the head of the historical and archæological department. The other sections are headed as follows: Zoology, Dr. Don Jêsus Sanchez; Botany, Dr. Don Manuel M. Villada; Mineralogy, Don Manuel Tornel y Algara, (C. E.); Geology, &c., Don Mariano Bârcena, (C. E.) It is evident that only such publications as come under the head of Archæology and History, can be treated of here at any length, still I cannot refrain from mentioning also all papers treating of subjects belonging to other branches. For, as the organization of the "Museo" plainly tells us, it is a working scientific institution, intended to increase as well as to diffuse knowledge in many different ways.

Señor Mariano Bârcena has three paleontological papers: an introduction to the study of the science, wherein he professes: "*Natura non fecit saltum!*"—and two parts of "materials for the formation of a work on Mexican paleontology."

Señor Jêsus Sanchez: A catalogue of Mexican birds, and their geographical distribution.

Señor Tornel y Algara: On the export of copper-ores.

There is also a very short Report to the Minister of Justice, which, while indicating a prosperous condition for the "Museo," is still entirely too condensed to satisfy the natural curiosity of outsiders, and foreign readers in general. We naturally take a deep interest in the welfare of the comparatively young institution, and while we feel that it is growing, would like to know how far it has grown as yet.

Turning now to the archaeological papers proper, we meet with a highly important and valuable publication at the outset, in the 1st number, or "Entrega."

The *Cuaruaxicalli of Tizoc*, by Señor Don Manuel Orozco y Berra. While the great name of the author of "Geografía de las Lenguas" is in itself a guarantee of excellence for the work, its subject also is of very great importance. Señor Orozco treats of the different kinds of stones of sacrifice used by the ancient Mexicans, and finally discusses that cylindrical carved block which is known under the name of "gladiatorial stone." It is a singular fact that, however much has been said and written about the offering up of human victims by the aborigines of Mexico, and the modes of slaughtering the prisoners, nobody has ever attempted a critical investigation of the most prominent instruments, to wit: the slaughter-blocks themselves. Señor Orozco now has done the much needed work, donating us with a complete monograph on the Mexican stones of sacrifice.

As might be expected, he finds more than *two kinds* of these hideous contrivances of stone. Their number is increased by him to *five*, namely: *Techcatl—Temalacatl—Teocuaruaxicalli—Cuaruaxicalli Xihuipilli Cuauhitlehuatl—Cuaruaxicalli*.

Without presuming to contradict the distinguished Mexican scholar, I still venture to suggest that the five kinds enumerated by him might be reduced to *three* types, of which the following are about adequate descriptions:

(1.) *Techcatl*, or ordinary slaughter-block. Mostly of obsidian or greenstone (black or green "Jasper," according to older sources,) about long enough and high enough to extend a man on it, and so shaped as to bend that victim, head and feet downwards, while the breast was correspondingly elevated. The width of this stone on its upper surface can be inferred from that of the sacrificial yoke, by means of which the captive's neck or throat was tightened; both wings of the yoke lapping over the stone on each side. (This yoke is figured by the late Mr. Brantz Mayer, by Mr. H. H. Bancroft, and especially by Captain Dupaix, who had found it near Orizava and carried it to Mexico.)

The height of the "techcatl" is stated by Durán, "to reach the girdle;" its length one "braza," or about eight feet. In the latter measure nearly all the authors of any note whatever concur. Sahagun and Gomara, however, represent the "techcatl" as round, "after the manner of a footstool" (tajon.) The name itself gives no clue to the possible shape, but Tezozomoc in his "Crónica Mexicana," (Cap: xxx) while describing a round stone, still uses the expression: "y alli mueran aspados en parillas." I would also take the liberty here to call the attention

of Sr. Orozco to that obscure passage in Cap: vii of the same work: "*que sereis aspados los cuerpos con tejas como de almuazas.*"

There is evident confusion among the older sources about the sacrificial stones, each one of them dwelling, sometimes rather exclusively, on that particular type which struck him most forcibly. To the authors, however, who speak of the "techcatl" in the shape above given, the important testimony of Father Géronimo Mendieta ("*Historia ecclesiastica Indiana*," Lib. II., Cap: xv., p. 100) must be added.

(2.) *Temalacatl*, stone of gladiatorial sacrifice. A cylindrical block of stone, with a surface more or less plain, and perforated in the middle. This stone is, in fact, the counterpart to the stake of the northern Indians, and of those of Brazil. The prisoner tied to the stake was expected to display almost superhuman indifference or fortitude against the most atrocious sufferings. The captive, fastened *on* the round "shuttle-stone," (from "tetl"-stone, and "malacatl," as Sr. Orozco very justly remarks,) had once more to show his bravery by resisting, unprotected and badly armed, the attacks of well armed warriors. His doom was, of course, sealed beforehand, but a last exhibition of skill and courage was demanded of him, a torture, moral if not bodily, like that of ruder and wilder tribes. We have numerous descriptions of the "temalacatl," but it is very doubtful whether there is one of these cylinders yet extant. From the descriptions we gather that it was placed, not on the summit-platform of the pyramidal "medicine-lodge" (or, rather, of the artificial hill or mound on which the "lodges" or "chapels" were built), but on a lower projection, since the hideously graphic tales of the butcheries—which Tezozomoc and Durán have preserved to us—always represent the medicine-men who had to kill, as *descending* ("bajando") towards the stone. Compare also Sahagun and Hernandez, or Nieremberg.

There can be no doubt as to the fact, that the captive was fastened to the *centre* of the block, and for that purpose the perforation mentioned was used. The rope was just long enough to allow him free motion on the stone to its rim, but not beyond it. Armed with a club of hard wood, and (possibly) a shield, his naked body painted white (the color of death), the prisoner awaited his enemy. The latter was fancifully attired, ordinarily masked in a manner similar to that of Western Indians at their great solemnities, and well armed. His object was not so much to kill the victim, but to hit or touch him once, when the latter was forthwith seized by others and dragged to another block, on which his heart was cut out in the usual way. The "temalacatl" was thus a stage, on which an exhibition preliminary to sacrifice took place.

Sr. Orozco y Berra says: "The honor of invention of the sacrifice and stone devolve upon Motecuzoma Ilhuicamina." His authorities are: Durán (Parte 1, Cap: xx), and Tezozomoc (Cap: xxx.) His quotations are correct, of course, but it is doubtful if the authors are right. In the first place no head war-chief of the Mexican tribe had the right to introduce a new rite of worship; this the tribe alone could do, either by popular vote (as in case of the election of a new "chief of men" or "snake-woman"), or by delegation. Again there are indications, as I have already stated, that the so-called "gladiatorial sacrifice" was but a state of transition, the original wild torture dying out, and what in a more advanced state of society became the "gladiatorial contests" of the Romans, looming up in its infancy. Finally, it is to be noted that the sacrifice on the "round stone" is mentioned previous to the year 1459 (date of its first inauguration, according to the "Book of Gold") already. Space forbids further discussion of the point.

3. *Cuauhxicalli*. From "cuauhtli" or "quauhtli," eagle, and "xicalli," bowl. Therefore, bowl of the eagles. The typical form of it is a round stone, more or less carved, having in the middle a concavity like unto a bowl or saucer, and from it a channel or groove towards the edge. It is to this type that Sr. Orozco y Berra refers the so-called "stone of sacrifice," which has been so plentifully described and represented, ever since its first notice by Don Antonio de Leon y Gama, in his interesting, although now somewhat antiquated work, "Descripción de las Dos Piedras," (Mexico, 1792. The stone was, as it is well known, discovered in the great square of Mexico, on the 17th December, 1791, and finally, after going to the University, 1824, placed in the court of the museum in 1873, where it now lays), of which the famous Calendar-stone forms the main topic.

There is, however, a picture of the "cuauhxicalli" which is much older than that of Gama. On Lam. viii of Part 1 of the plates of Padre Durán, a human sacrifice is represented, taking place on a round block, which in ornaments, and especially in the cup-like excavation of its center, bears the distinguishing mark of the "cuauhxicalli." (Father Durán died in 1588; so Davila-Padilla tells us.) It is probable that many descriptions of the "stone of sacrifice" are really intended for the cuauhxicalli. But some of them are indefinite; they mention a *perforated* stone also, whereas the one at Mexico has no hole; merely a central concavity. This concavity is stated to have been for the hearts which, after being presented to the idol, were thrown into it, whereas the channel conducted the blood gathered on the stone. We have an eye witness, Bernal Diez de Castillo, to prove that the hearts were afterwards burnt before the idols.

If now the *cuauhxicalli* was a stone of sacrifice, that is, if people were killed on it, the groove for conducting the blood must have been turned in a particular direction. The aborigines of Mexico were not very particular in their arrangements for carrying off the blood which they so lavishly spilled, else the stench which Bernal Diez noticed in and about their chapels ("hedor de sangre"), the coats of coagulated blood on the walls and floors, would have been removed in time for the visit (of an official character) made by the Spaniards. If, therefore, the blood of victims was carried off in one way, it was for a particular purpose, and this could only be, as Tezozomoc intimates: "to wash the figure of the sun." Thus we have the connection between the "*cuauhxicalli*" and the so-called "calendar-stone." There can be no doubt, after the acute researches of Señor Don Alfredo Chavero and of Prof. Ph. Valentini (presently at the city of New York), that the latter monument is not the "gnomon" to be which it has been erroneously represented by Sr. de Leon y Gama. But it is not the "*cuauhxicalli*" which Sr. Chavero makes of it ("*Calendario Azteca*"), because it lacks the latter's distinguishing features, to wit: the central concavity and the outlet or channel from that "bowl" to the rim. The "calendar-stone" was a horizontal and not a vertically inserted block; it was placed before the "bowl," as the *stone of the sun*, and the blood of the sacrifice, the proper "heart's blood" of the victims, was conducted on it to "wash the face of the sun."

Even a careless glance at the most ordinary picture of the "stone of sacrifice" must satisfy us that it really was the "*cuauhxicalli*," or bowl of the eagles just treated of. Both the concavity and the channel are there very plainly marked. This mass which (according to Brantz-Mayer) was 9 feet in diameter (exact measure according to Gama, § 121: 3 varas, one pulgada, and  $4\frac{1}{2}$  lines, equal in all to  $8.\frac{9}{100}$  feet English,) presents on its upper surface certain ornaments with starlike points which Sr. Orozco at once identifies with the figure of the sun. I believe, however, that these ornaments have no symbolical import, notwithstanding the description of Durán, (Cap. xxiii) and that the "*figura del sol*" is intended for that occupying the center of the "calendar-stone." For if that figure should "enjoy" the blood of the victims, contrivances like those on the stone in question, made for the evident purpose of *carrying off the blood as soon as possible*, did not correspond to such a purpose. Besides if, as the tales have it, people were killed on the stone, it must have taken place on that "figure of the sun" itself. Furthermore, the Mexicans have their well determined picture to represent the sun, and this was not the one on the "*cuauhxicalli*," but the face with protruding tongue occupying

the center of the calendar-stone. (It is known to be the same as on the so-called "tablet of the sun" at Palenqué in Chiapas.) If now Durán tells us that the blood was collected in the hollow ("pileta"), there to wash the face of the sun, it was because from this concavity the blood was directed on that face by the channel.

It is a well known fact that the rim of the "sacrificial stone" shows a series of human figures, always in pairs. To Señor Gama these figures represented a dance, one of them being the "leader." It is obvious that such is not the case, and cannot be. There is always a warrior in full dress, with the characteristic ornaments of the head war-chief of the Mexicans, who with one hand seizes a tuft of hair on the head of a man fronting him in a humble and dejected attitude. Each one of these groups, of which there are fifteen, represents evidently as many victories gained by the Mexicans over as many foreign tribes, as the analogy of the picture with the Codices shows. The victorious warrior is always accompanied by the "name," or that peculiar sign placed behind the head, denoting the name of the person, tribe, place or object. It is admitted in general that these "names" apply to the vanquished figures, and as such they are interpreted by Sr. Orozco y Berra also. The point turns on the question as to whether the fifteenth group has a name to it or not. The figure is somewhat indefinite, and what Sr. Orozco determines as the word "Cuetlaxtlan," looks just as much like an appendix to the headdress of the humiliated man. I shall not attempt to answer this at all, since it would require an attentive study, not only of the very faithful copy which Sr. Orozco has published, but of the original itself. As an illustration, what he explains as the name of the prisoner of the third group (c) is appended to the headdress of the victor in the fourth group (d). The interpretation of this sign is very unsatisfactory besides. If the names apply to the victorious parties, instead of to the vanquished ones, then it becomes very difficult to determine them, because we do not know whether tribes or kins are intended to be represented. I do not wish to be understood as suggesting an explanation at variance with that of Señor Orozco y Berra, but merely advert to a possible doubt in relation to it.

There is a marked difference between the head-dress of the first warrior and those of the fourteen others. The former is much larger and conspicuous. It is also found in the Codex Telleriano-Remensis, as Montezuma's head-dress, and on the plates accompanying Durán's "*Historia de las Yndias de Nueva-España, I Islas de Tierra-Firme.*" Plainly connected with it is a human leg, standing to it in the relation of "name." This is commonly regarded as the symbol for "Tizoc," "Tizocic," etc.,



sixth head war chief of the ancient Mexicans, in the regular series of their officers. On the strength of this, Señor Orozco has called the monument "Cuauhxicalli of Tizoc." Unlike to the calendar-stone, which bears on its face the date of its inauguration (13 Cane), the "sacrificial stone" has no such chronological mark, unless the eight almond-shaped marks occurring thrice on the rim of the block indicate a year, "eight flint," (Tecpatl), thus denoting either 1448 or 1500. But neither of these dates would correspond to the term of office of "Tizoc," the former agreeing with the older Montezuma, the latter with "Ahuizotl."

Tizoc, according to the Codex Mendoza, occupied the position of head war chief of the Mexicans, from 1482 to 1486. His full name is "Tizoczi Chalchiuhtona," and it is generally represented as a leg, sometimes transfixed by an arrow. But the name is also painted as a stone, through which a thorn is thrust. The latter picture can be associated with the "chalchihuitl," or green-stone, highly esteemed by the aborigines for ornamental purposes, and which is one of the compounds of the name, but how the leg ("metztli") comes into play, has always been difficult to explain. There is but one plain root in the name, the verb "zo," to bleed. The prefix "ti" might relate to "tizatl," white earth, but on the whole there is barely sufficient ground for the etymology in any shape. The explanation given by Sr. Orozco y Berra, appears to me also doubtful. We have no cause to change the first syllable "ti" into "te," since the former is expressly and uniformly used by all authors.

But the Mexican name for leg is also the same for *moon*. Meztitlan, place of the moon, was the tribe against which Tizoczi warred most bitterly during his short term of office. It may be, therefore, that combined with the wound to correspond to the verb "zo," and thus making "metztlizoc" the picture of a human lower limb, became indeed the sign for tizoc. Perhaps the latter word is even nothing else than an *abbreviation of the former*. All of which is respectfully submitted.

There is one singular thing yet to be noted. There is but one direct mention made of any stone of sacrifice ever made under Tizoczi, and this mention is found in Tezozomoc (Cap: LIX), who positively states that this stone was a "*techcatl*." It follows that the "cuauhxicalli" in question cannot be the block of sacrifice mentioned as made under Tizoczi.

Notwithstanding the sign of the limb, and notwithstanding also the high authorities of both the late Sr. José F. Ramirez and of Sr. Orozco y Berra, I am of opinion that the monument was inaugurated while Montezuma Ilhuicamina was head war-chief of the Mexicans, and that the eight figures of almonds,

therefore, indicate the years "eight flint," or 1448 A. D., corresponding to the eighth year of that chieftain's term of office. I may be permitted to state my reasons.

The construction of a stone of sacrifice corresponding in every respect to the one occupying our attention is mentioned, and the stone is minutely described, by Diego Durán (Cap: xxiii), and by Fernando de Alvarado Tezozomoc (Cap: xxx), as having been inaugurated during the term of office of the older Montezuma. Durán even says: "that around it, for rim or border, all the wars should be painted which they had had until then." Further on he mentions the wars of Tepeaca, of Tochpan, of the Huasteca, of Cuertlaxtlan, of Coaxitlahuac. Basing on these names (in part) Sr. Ramirez affirms that they are not found on the "sacrificial stone," Cuertlaxtlan excepted. Sr. Orozco further concedes Tochpan. If, however, we compare the list of tribes (pueblos) captured by the older Montezuma, as given on plates vii and viii of the Mendoza Codex, with the "names" on the stone, as interpreted by Sr. Orozco, we find several corresponding, besides the above two, and some (Xochimilco and Culhuacan) of pueblos certainly conquered by the Mexicans long before the time of "Tizoc." In fact there is nothing to justify the assumption that the groups on the rim of the stone represent as many pueblos vanquished by the Mexicans under the leadership of that chief, save the figure of the leg, which, for reasons not yet fully explained, is assumed to stand for the name of Tizoczin. But even this figure may easily apply to another officer.

As I have elsewhere proven, the Mexicans had two executive officers, one of which was the "chief of men," erroneously decorated with the title of "monarch," whereas the other bore the title of "snake-woman." Both of these chieftains had to be distinguished braves, and either of them had the supreme command of the Mexican forces in war; although the "chief of men" was more properly the "general" of the confederacy of tribes of the Mexican valley. Now, among the most conspicuous leaders filling the office of "snake-woman," also at the time of the first Montezuma, there was one called "Tlacaelleltzin." The name, as already Torquemada remarks, is composed of "tlacatl," man, and "ellel," courageous or generous. Now it was one of the distinguishing marks of brave men among the Mexicans, to have scars on their lower limbs. (So the "anonymous conqueror" and Durán tell us.) The wounded leg may, therefore, very properly stand for "tlacaellel," valiant man, and thus the objection is removed to placing the inauguration of the stone at the date carved on its rim, to wit: 1448, or the year "8 flint."

In conclusion, I beg to remark that the "sacrificial stone" was exhumed in the great plaza of Mexico, in front of the cathedral, among the debris resulting from the destruction of the great "teocalli" of the original pueblo. Tezozomoc (Cap: xxx), says: "The stone of sacrifice is to-day near the church of Mexico." This stone of sacrifice is the one which he and Durán describe as having been made while the older Montezuma was "chief of men." Consequently I feel authorized to differ from the distinguished Mexican scholar, in assuming that the "sacrificial stone" to-day at the National Museum, although a "cuauhxicalli" indeed, was not Tizoc's make, and thus fabricated between 1481 and 1486, but was hewn and carved while the older Montezuma was "chief of men," and Tlacaeltzin was "snake-woman" of the Mexicans, and inaugurated in the year eight "flint," or 1448 A. D.

"*An Aztec Idol of Chinese Type.*" Description and drawing by Director Don Gumesindo Mendoza of a small idol made of dioritic rock (24 mm. high and 18 mm. long,) found in 1867, in the municipality of Ichcaquixtla, district of Tepeji, State of Puebla, in a tumulus or mound. The mound contained "the remains of the entombed person, a great statue, several objects of clay, and a collar, one of whose grains was the idol in question." Sr. Mendoza precedes his remarks on the figure by the following interesting note (p. 39): "The surface of our country is covered by tumuli of various sizes; these are, as the word indicates, hillocks of conical shape, more or less regular, made of stone and clay, frequently of stone and an excellent mortar." (It would be very interesting to ascertain the latter fact *positively*.) "These tumuli were the sepulchres of our forefathers; in these they deposited their mortal remains or their revered ashes. The latter were enclosed in urns of clay or limestone, whereon they engraved or painted the hieroglyphics indicating the social position, and the date of the sad event for the family or tribes. Alongside of the remains they placed the arms which he wielded in strife; if he was a king or a warrior—together with his most precious jewels—if it was the grave of a woman, it contained the objects most commonly of household use."

We have thus (as older sources indeed tell), side by side, in aboriginal Mexico, cremation and sepulture. It is much to be regretted that Sr. Mendoza does not give us any information on the distribution of both kinds. A map showing how "cremation mounds" and "sepulture mounds" are distributed and located relatively to each other, would be a very valuable addition to the archæology of Mexico. That the country does not lack the man able to do it, is shown not only by the "Anales," but especially by the survey of the great mounds of Teotihuacan, through the celebrated engineer, don Garcia y Cubas.

Thus far "Entrega" No. I.

"Entrega II. opens with:

"*A Historical Question*," by Señor Don Jesús Sanchez.

An earnest, dignified, and skillful attempt to prove the truth of the story that Don Fray Juan de Zumárrago, First Archbishop of Mexico, destroyed by fire the so-called "aboriginal archives" of Tezcucó. Señor Sanchez will be properly attended to, at Mexico, by one who is far more able to do it than myself. While the destruction of antiquities of all kinds by early missionaries is amply proven, and needs no discussion, the burning of a vast library forming heaps of picture-sheets, like large mounds, is an invention, or at least a gross exaggeration. The principal authority on which it finally rests, is that of the so-called Tztlilxochitl's of Tezcucó, a succession of native writers, bent upon extolling and exalting the power and culture of *their* tribe over all others. The last one of their name, Fernando de Alba Tztlilxochitl, has left us an almost burlesque description of the "Royal Library" of Tezcucó. Although Fray Juan Zumárrago was elected Bishop in 1527, and the reported "auto da fé" consequently took place at least 7 years after the Conquest, no author or writer of that time mentions to have *seen* such a library, except Bernal Diaz de Castillo, who calls them distinctly "tribute rolls," and who says that there was "a house full of them," at Mexico. "Historical question" is important because it implies a higher degree of culture of the aborigines than that actually existing. I have neither time nor space to enter now into a full discussion, which must, from our point of view, mostly dwell on the reliability of certain sources. Besides, there is now in progress a work which will set at rest the question raised by Sr. Sanchez.

"*Inauguration (or Dedication) of the Great Temple of Mexico*," by Sr. D. Manuel Orozco y Berra.

Description and interpretation of a slab of irregular form and thickness, with a rectangular face, polished and carved, about 1 foot 11½ inches long, by 2 feet 11 inches high (0.605 mm. by 0.885 mm.). This slab was already described and discussed by the late Sr. Ramirez in the appendix to his translation of Prescott's "Conquest of Mexico," edition of 1845.

Both Sr. Ramirez and Señor Orozco y Berra agree in regarding the carvings on the stone as commemorative of the dedication of the great "teocalli" of ancient Tenochtitlan. This event, which is minutely described by most authors, and also painted on the Codex Telleriano-Remensis and the Codex Vaticanus, is said to have occurred in 1487. Now, as Sr. Ramirez has remarked, and Sr. Orozco has confirmed, the slab in question has nearly two-thirds of its surface covered by the figure of a cane ("acatl"), accompanied on *each side* by four disks, representing as many

dots, thus implying that the whole signifies the year "eight cane" ("chicnéy acatl"). This year occurred twice in the course of the fifteenth century, for the first time in 1435, and again in 1487. The picture, therefore, must represent some event which occurred in one of these two years. The upper third of the plate shows two human figures wearing both the dress and ornaments of the head-chiefs of Mexico, facing each other, and having between them a singular structure which cannot be described, and each of these human forms has, behind its head, the characteristic figure which designates the "name." The one to the right represents an opossum-like animal to whose back the conventional Mexican sign for water is attached. It is uniformly regarded as expressing the name of "Ahuizotl" (otter or water-rat), which name was that of the Mexican head war-chief immediately preceding the last Montezuma, and who, so we are informed in the Mendoza Codex, held the office from 1486 until 1502 (plates XII. and XIV). The other human figure has as symbol of its name, a streaked *leg*, similar to the one which I have already mentioned in connection with the name of Tizoc.

It is thought more than likely that the occurrence commemorated by the slab took place during the term of office of Ahuizotl, and this is the view taken of it by our two distinguished Mexican authorities. Consequently, also, the year "8 cane" is that of 1487, A. D., according to our computation of time.

But, aside from that chronological sign, there is another one, crowning the middle of the slab's or tablet's upper third, namely: the sign seven cane ("chicome acatl"). For reasons which I cannot relate here yet, this cannot stand for a year of that denomination, but must indicate a particular *day*. It gives us the precise date of the event as the thirteenth day of the month Tzcalli, corresponding, perhaps, to the 19th of February, 1487, according to Sr. Orozco y Berra.

The event which this tablet is intended to commemorate would be that horrible butchery of captives which almost every history of Mexico is fond of relating, and which has given to the name of "Ahuizotl" a gloomy importance. It was, beyond all doubt, an Indian solemnity of great magnitude, whose chief performance consisted in the shedding of much blood. It is probable that, even with the slow process of cutting out the hearts, several hundreds of men were slaughtered on that day. Of course, many authors admit fabulous numbers, as, for instance, Tztlilxochitl, who states that 80,400 was the number of the slain. It would be wasting time to refute these absurdities, as even the most superficial knowledge of the mode of sacrifice must satisfy us at once of their impossibility.

Sr. Orozco very properly recognizes in the central figures a picture of the sign "calli" or house. This commonly stands for tribe, and in this case would indeed indicate Mexico, were it not that the prickly pear, after which the Pueblo was named, and which was its blason, is not on the tablet. The "calli" therefore designates, in this instance, the "teocalli," or medicine-lodge of the tribe; a fact further established by the serpents coiled around it, and painted elsewhere as a symbol for the walls surrounding the edifices. There cannot be any doubt, therefore, of the correctness of the interpretation by Sr. Orozco y Berra, to-wit: that this slab really commemorates the solemnities of inauguration of the tribal place of worship of Mexico, which occurred on the day "seven cane" of the year "eight cane," or 1487, A. D.

This is further supported by the appearance of the two human figures on the slab. Both chieftains are represented at the act of doing sacrifice. Each holds his censor, and each one also pierces his own ear with a large spear, thus performing that cruel act of self-torture which always accompanied any solemnity whatever of the ancient Mexicans. It is to be noted, however, that both are represented *alive*, that is, with their feet uncovered, and as performing the same acts at the same time, together, and at the date engraven on the slab. Now, Sr. Orozco, as well as his predecessor, Sr. Ramirez, interpreted the striated or scarred limb behind the left-hand man, "Tizoc," suggesting that since this chieftain's term of office had witnessed the beginning of work on the famous "teocalli," his effigy had been placed on the commemorative tablet. I take the liberty of remarking, here, that Tizoc had died at least one year previous to the inauguration, and that even if the Mexicans had intended to represent him, hewn out as a man then *already dead*, or *with his feet and half his body shrouded*. On the contrary, both figures on the slab are those of high chiefs fully alive in the year "8 cane," or 1487, consequently they denote, respectively: the one to the right the "chief of men," Ahuitzotl, the one to the left the "snake woman," Tlacaellé, both of which played a conspicuous part in the inaugural ceremonies under discussion. The limb or leg therefore stands, here as well as on the stone of sacrifice, for the name of "Valiant" or "brave man."

A lengthy discussion of the question of human sacrifice and cannibalism among the ancient Mexicans, closes this important and very interesting paper. As might be expected, Sr. Orozco y Berra concedes, that they sometimes partook of the flesh of human victims. This was always an act of worship, as the sedentary Indians of Mexico were not cannibals to that revolting degree, as the aborigines of Carib stock, or especially as the squalid sedentary Indians of the valley of Cauca, in Columbia. Of course it is conceivable that in the case of dire necessity (as

for instance during the defense of the pueblo of Tuenuchtitlan against Cortes), the Mexicans may have eaten the flesh of their *enemies* as food, but it is expressly stated, that even while suffering the most extreme hunger, they never touched the bodies of their own dead, rather concealing them in their own houses, notwithstanding the unavoidably deleterious results of that policy.

"*Comparative Study of the Sanscrit and Nahuatl*," by Director Mendoza.

Sr. Mendoza enjoys a beautiful language, his expressions are always highly poetical. He is penetrated with the idea of the unity of human language, consequently of the unity of the race. To him, the Sanscrit is the original mode of speech. Therefore, he gives us nearly four pages of comparisons between Sanscrit and Nahuatl words. Some of these are striking, while others, are of course, rather evidences of good and honest intention on the part of the author, than anything else. The whole subject should be treated by a thorough linguist (like Mr. Gatschet, for instance), who would be better enabled to form an opinion of the real value of Sr. Mendoza's observations and conclusions.

It is, of course, exceedingly interesting and valuable to make attempts like the one now "under treatment," but they are also exposed to great dangers. Still, the mere attempt must be hailed as "a step in the right direction." But, on he plunges, into the depths of indo-germanic tongues, thus wandering far away from the present home of the Mexican idioms. Let us suppose that Sr. Mendoza should attempt to establish once the affinities between the Nahuatl and Tarasca, Maya and Gguiche, and other Indian modes of speech, occupying areas *contiguous* to the Mexican? Our own distinguished linguist Mr. Albert S. Gatschet, is doing and has done, such a handsome work in the idioms of New Mexico and Arizona.

"*An Aztec Idol of Japanese type*;" by Director Mendoza.

Found in a mound of the State of Mexico, and presented to the Museum, by Sr. J. Diaz Leal.

It is of clay (burnt), and resembles, in the cut of the eyes, somewhat the terra-cotta Idol from Ometepe, Nicaragua; figured by the Hon. E. G. Squier, in p. 362, Vol. II, of his "Nicaragua."

"Entrega No. III," opens with:

"*A Bronze Chisel (or Engraving Tool, 'cincel,') of the Ancient Aztecs*;" by Sr. G. Mendoza.

Evidently a "burin," or engraver's tool, about three inches long, and slightly curved. Locality where found is not stated. It is covered with a thin black crust of "subcarbonate of copper and tin." Beneath this crust the metal, if scratched with a file, appears red "like gold;" its density is equal to 8.875. Malleable, though tough and hard, even very hard, though not as hard

as steel. Fracture finely granulated. It appears that the Museum has a small collection of such bronze chisels. One of these was analyzed and was found to consist of 97.87 of copper, and 2.13 of tin, with minute particles of gold and zinc, both of which were accidentally introduced.

It appears that Sr. José F. Ramirez, caused a Mexican object of bronze to be analyzed, which he found to contain copper and zinc in the proportion of 90. to 10. An analogous feature is found in Peru, where two proportions at least exist, one of which varying between 2 and 3 % of tin, whereas the other (that of a chisel) is 94. copper to 6 of tin.

*"Mendoza Codex; an attempt at interpretation of hieroglyphics;"* by Sr. Manuel Orozco y Berra.

Unfortunately, we have but two numbers of this paper, being the old interpretation of the Codex, as contained in Lord Kingsborough's "Antiquities of Mexico." Two colored plates, giving plates I and II of the collection, in colors, are as yet published. I shall refer to it again in the following number, in "Entrega IV."

"Entrega IVa."

*"Mendoza Codex;"* by Sr. Orozco y Berra. 2d paper.

Concludes with a short sketch of the history of this celebrated collection, which, from all appearances, was shipped from Mexico to Spain, with an interpretation made by Indians of Mexico, in 1549 about, and whose original is possibly at Oxford, possibly also at the Escorial. I have no space to devote to the elucidation of this point. The Codex was painted since the conquest.

*"The Pyramids of Teotihuacan;"* by Director Mendoza.

Accompanied by two very excellent plates, presenting the world-famous mounds as they now appear.

We are of course, treated to the known tale, that one of these mounds was dedicated to the Moon and the other to the Sun; the first one (north), being 46 meters high, the other (south), 66 meters, or respectively about 150 and 215 feet. These are almost the only measurements given in this paper, and even these are not original, but copied from Sr. A: Garcia y Cubas. The bulk of the essay is devoted to the mentioning of lesser remains, scattered densely around and about the huge pyramids, like unto tumuli, and even the foundations of houses. Unfortunately, all is very superficially noted, and still more attention is bestowed on the question of the possible or probable origin of the remains.

These speculations, which, like almost every other paper of Sr. Mendoza, show a vivid imagination, and are expressed in a beautiful and highly poetic language, cannot well occupy any space here. A careful survey of this very rich field of ruins would be much more important, not to speak of the very difficult and costly work of actual excavation and exhumation.



## PEREZ' MAYA-SPANISH DICTIONARY.

BY ALBERT S. GATSCHET.

The Maya language is one of the sixteen dialects of the linguistic family of the same name. It is spoken in the Mexican state of Yucatan, and, being extended over an enormous area of territory, must necessarily diversify itself into several subdialects. We are much better acquainted with the subdialects of the northern coast than with those of other Yucatecan provinces, and the dialects of the interior can be studied only with difficulty on account of the disturbed political state of these countries. The Indians of the interior have been in open revolt against the State Government for the last fifteen years, and it is estimated that at the present time not over two-fifths of Yucatan Indians are adherents to the laws made by the Spanish rulers. Although some dialects of the *Maya linguistic family* have been studied, we cannot think yet of establishing the principles of comparative Maya grammar but in general outlines. In all of these dialects the verb appears to be a noun-verb, and to show a considerable development of inflectional forms. Word-derivation is effected by prefixes as well as by suffixes; several series of personal pronouns exist, and words close oftener in a consonant than in a vowel.

The Maya language of Yucatan was studied and reduced to writing at an early epoch by Spanish missionaries, clericals, and students of history and antiquity. Many works were, in the 16th, 17th and 18th centuries, composed in this language, while others treated of the Maya people, its antiquities, peculiar customs, being written in the imported Castilian language. The majority of these writings, however, have never appeared in print, and, up to the time of the Abbé Brasseur de Bourbourg's publication, scientists were, for the study of this harmonious language, restricted to liturgic and other religious texts, and to some short grammars like that of Beltran. Brasseur collected from oral, manuscript and printed sources, a vocabulary of about 9000 words, and enlarged with it his fac-simile publication of the *Codex Manuscrit Troano*, one of the few *anahte* (Perez writes *anahte*) sacred books, rituals or histories, which have come down to our time. This work is of a splendid typographic and artistic execution, and was published in Paris (1870), in two large quarto

volumes; but the vocabulary contained in it is not without its grave defects. We fail to discover a careful *etymological* arrangement of the various significations of one word, in which the original meaning is placed before any *derived* meanings; but we find a number of phantastic and impossible significations added to nouns and verbs, the pure product of imagination, and subjoined to the words solely to give basis and relief to the geologic and cosmogonic explanation of the Codex by the author. Etymologies from Sanscrit and other Indo-germanic radices are contributing to the entanglement of Brasseur's erudition, from which none could find his way out, if the true significations were not added by him to each term in Spanish.

A work of quite different character is the recently published lexical volume of Don J. Pio Perez. The full title of this work is as follows: *Diccionario de la Lengua Maya, por J. Juan Pio Perez. Merida de Yucatan. Imprenta literaria de Juan F. Molina Solis. 1866-1877. Quarto.* The dictionary is set up in two columns, and holds 437 pages.

The first preface, ten pages, is written by *Eligio Ancona*, the editor of the work, and dated Merida, June 15, 1877. Ancona, a zealous student of the archæology of his native country, gives a short account of the vicissitudes which the volume underwent before it could appear in print, and mentions the assistance of Dr. Hermann Berendt in the achievement of the work which had been left unfinished through the author's death.

The second preface (20 pages) contains a biographic notice of Perez, written in 1875 by his friend *Dr. Fabian Carrilla Suaste*, from which we extract the date of Perez' birth, which occurred in Merida, July 11, 1798, and of his death, which took place on March 6, 1859. Perez' treatise on Maya chronology was inserted, together with texts in the native vernacular, by Stephens, in his "Incidents of Travel in Yucatan."

The *Diccionario* of Perez offers to students the great advantage of describing with precision the pronunciation of every Maya sound represented by a special letter. Precision is observed only where a full knowledge of the subject exists, and that Perez fully possessed the language appears not only from every column of the book, nay, from every word. The significations are laid down in terms short, terse, lucid and unmistakable; no unnecessary learning is displayed, and the large number of vocables, which cannot fall much short of 22,000, shows how diligently the author has been at work. The basis, or thematic form is not *always* stated in derivatives, but the words of the same radix stand so close to each other that the student can find the origin of most terms without difficulty. Syntactic instances are not often added to the words to prove the significations given

to them, and in this respect the work shows almost the character of a simple glossary, or vocabulary. Perez had traveled much in the interior of Yucatan, and thus could enrich his volume with many terms rarely or never used on the coast. Chronological and other terms of importance to archæologists have been gathered conscientiously, and many words descriptive of the actual customs and habits of the Yucatecos are added, as will be seen by consulting the articles *kehethcunbil*, *hulben*, *kinin*, *maben*, *ppocan*, *tacuntinkul*, *thohah*, and others. Scientific Latin names are not generally added to objects of natural history, but these are minutely described. Proper names of persons and localities are not included in the dictionary, but the latter will be found in Brasseur.

By composing this volume, Perez has contributed largely to our knowledge of Mexican idioms, but our gain would be twice as important if the *Spanish-Maya* part were added in a second volume. If our inquiries into the signification of the "calculiform" Maya characters can be helped by a more thorough acquisition of the Maya idiom, we may also feel indebted for this to Perez, and to the learned editor of his work, Eligio Ancona.

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#### A RARE BOOK.

Before Cortez' conquest of Mexico, the adventurous JOAN DE GRIJALVA made a descent upon the peninsula of Yucatan, and of this expedition a brief historical account was drawn up by Juan Diaz, his chaplain. This is the only authentic history of this expedition, but is so scarce that Mr. Prescott, the historian, has never been able to find a printed edition. An Italian translation, made shortly after 1518, was however printed in Venice, and appended to the oriental travels of Ludovico Varthema of Bologna, a little volume of 88 pages in small 8vo, which is also of extreme rarity. The John Carter Brown Library of Americana, in Providence, R. I., possesses one of these volumes, and Grijalva's expedition is given there, from leaf 89 to 101, with the following title on head of page 89 verso: "*Itinerario de l'armata del Re catholico in India verso la Isola de Iuchathan del anno. 1518. Allaqual fu presidente & Capitan General Ioan de Grisalua il quale fatto per el Capellano maggior de ditta armata a su altezza.*" Another title stands before this, and its contents are repeated at the book's end. The leaves are numbered on *one* side only, and thus the appendix made by the chaplain of Grijalva is filling 24 pages. Hakluyt's collection of ancient travels has no translation of it. The large temples and other structures on the island of Cozumel, on the Yucatan coast, are minutely described, and this sketch is to be counted among the most important contents of this curious book.

## THE SOURCES OF INFORMATION AS TO THE PREHISTORIC CONDITION OF AMERICA.

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There are three ways of ascertaining the condition of society in the prehistoric period. The first is by tradition, the second by physical geography, and the third by archæology, or the relics and "remains of lost empires."

These three sources of knowledge are before us to furnish their description of the prehistoric times in America.

There are, however, some stages of society which tradition does not reach, and for these we either have to find a substitute to the first source of evidence or depend altogether on the others.

This is so in Europe and the older continents. There, there are certain ages of human existence of which no story remains; nothing but the land which was inhabited and the relics or ruins which lie buried deep in the soil or covered with the sands of the desert.

Civilizations have existed and passed away of which there is no tradition, nothing but the record of silent monuments. The site of Troy was occupied by a people preceding the Trojan, but even Homer knew not of this buried city, and no song celebrates its hidden wonders. Egypt, too, had a glory which departed, and the only record left was that contained in the monuments which have survived the "wreck of empires and the tooth of time." Nineveh and Babylon and the Chaldean Empire have left great heaps of ruins and many rude monuments; but around many of these silent ruins not even a myth lingers to echo the story of their departed greatness.

So in America, there are races which have passed away, leaving no record behind them, and the earliest period of human existence is here veiled in impenetrable obscurity. Not even the fragment of a tradition has floated down to us. We know that these races existed, for we have seen their foot-prints, but not an echo of their voice lingers; no fragments of their story are discovered. Their skeletons lie mouldering in nameless graves, and all the witness which we have is the speechless, grinning skull or the silent earth-mounds in which they lie buried. Their works, with the rude architecture which they practiced; their relics, with the traces of their art and handicraft upon them; or occasionally an emblem or symbol inscribed on some vase

or vessel, or built into some great earth-mound; these are all that they have left behind, but no record attends them. Their hieroglyphics, if found, are obscure, and no key is left for their interpretation.

There is, however, one method of approach to these obscure ages which may be substituted for this missing link of knowledge; a method which has been practiced in reference to the early cultus of the European nations. It is that of analogy, the analogy of history. To illustrate: The Etruscans of Europe have furnished difficult problems. They were once almost an unknown people. Their ethnic connection has been disputed. It is still a question whether they were Pelasgian or Tyrhenian, Aryan or Turanian; whether their cultus came from the North and was a development of the savage races of the mountains, or from the South, transported from Asia or the East. History does not inform us. Their rude Cyclopean architecture, the traces of art, which reached so high a stage of development among them, and the rude inscriptions occasionally discovered, are still objects of wonder.

But the Etruscans are not now an unknown people. They have been studied until a fair degree of knowledge of them has been attained. How have we learned about the Etruscans? By the analogy of history. Men have reasoned from the known to the unknown. Their forms of architecture, their specimens of art, and the fragments of inscriptions, many and varied images, have been examined, and through known Aryan symbols upon them, or by the traces of Pelasgian divinities, or by the analogy of later languages, and with the aid of later history, they have come to be understood, and now the Etruscans are regarded as almost as well known as an historic people.

But there are many prehistoric races in America which are like the Etruscans. There may not be the same halo about them as there has been about that ancient people, nor is there any classic glory connected with their memories, yet there is the same separation of the later and the earlier races, the same dark obscurity hangs over their early state, the same wonder is awakened by their rude architecture and mysterious inscriptions, and the same admiration is felt for their beautiful specimens of handicraft.

The evidence of a higher culture among them is also found, and the traces of an elaborate and complicated religion, as well as the occasional inscriptions, which indicate possibly a familiarity with letters even, all serve to make these prehistoric people as worthy of investigation as ever were the Etruscans of Europe. It has, indeed, been maintained that there are striking resemblances between some of these American races, especially those

- in Peru, to the Etruscans, and the affinities and the peculiarities of the Turanian race, to which both are supposed to have belonged, have been studied on this account with more thoughtful consideration.

But if we are to ascertain anything about these earlier people it will also be by the analogy of history. We are reminded that the history of nearly every land has been divided, as was that of Greece, into three great periods, the Mythical, the Heroic and the Historic. These almost always follow one another. In Egypt, in China, in Japan, as well as in Greece, a fabulous history preceded the true, so that the antiquity of these people extended back in immense cycles. The reign of the gods preceded that of men; this was followed by an age when divine and human beings were mingled, and this again was followed by the distinctively human; but each age shaded into one another so that it is almost impossible to draw the line between them.

Such is the realm which tradition alone opens before us. There is something shadowy and uncertain about it, and we maintain that the traditions of these Oriental countries as to the extreme antiquity of the nations, or as to the early state of society, or the national grandeur in the earliest times, will prove false. It was the ambition of these nations to prove a very ancient existence, and later inventions and improvements were by them reflected back upon the earlier times. There may also be a tendency in our own country to give too much credence to tradition, or to rely too much upon imagination in making up our mind as to the condition of the races in prehistoric times, and especially as to the extreme antiquity of man upon the continent. In reference to the historic races of the continent it is an unreliable evidence. The changes of the population are too rapid, the memory of the savage races too uncertain, and the means of communicating or transmitting tradition too imperfect.

It should be said, too, that there are localities on the American continent where there are no traditions of the prehistoric people. The record which may be found in the fragmentary accounts of the last hundred years is all that can be found, and even then this record comes from the broken and decimated tribes of nations, which have impinged upon one another, and who were not occupying their native seats. The description of native tribes before they were removed from their original habitation can be gathered only from a few border tales, or military reports, or the story of the frontier hunter, and the traditions of the locality have never been gathered. Indeed, there are sections in North America which are so strictly prehistoric that no history comes in contact, either by tradition or otherwise, with the

prehistoric times. Of the six or seven grand divisions of the prehistoric population not the half have ever been visited or explored, so that the traditional history could be given with any reliability. The portions of the continent bordering on the Atlantic Ocean and the Gulf of Mexico have indeed left to us something of an aboriginal history, and the descriptions given of these native tribes in their original abodes may furnish possible analogies for the more remote prehistoric races, but the regions which were the homes of that mysterious people, the so-called Mound Builders, that, also, occupied by the ancient Pueblos and Cliff Dwellers, and we might say all of the interior of the continent, have been left without a history, even of the later tribes. One great work of the archæologist is to gather the fragments of this history from such sources as can now be reached, and so at least draw a picture of the country as it existed during the presence of the aborigines. But as to the more ancient period, neither history nor tradition furnish us with any satisfactory knowledge, and our only source is that referred to, namely, that of analogy.

The manner in which the analogy of history can throw light on the prehistoric ages should then engage our attention.

There is one way at least we may say that history illustrates the prehistoric, and that is by explaining the use of the structures and relics which have survived to modern times. By history, however, we mean the history of the aborigines. It is worthy of remark that there was a period in the history of our land when the proper use of these aboriginal structures and relics could be much better understood than at the present time. In the early era of the Discoveries these works in many localities were occupied, and though they were not in all cases erected by the people who dwelt in them; yet their later use serves well to illustrate their earlier, and therefore the history of these times is very valuable. The mode of life of the successive races was so similar, that it was not difficult for the later races to build on almost the same model which prevailed in the preceding ages. The organization of society and government was also so similar that they demanded similar structures, and many of the same implements and weapons were used by the successive races.

The council-houses, temples, burying-places, as well as private houses might differ in the material, and to a degree in the shape, but as the organization of society of nearly all the earlier races continued on the same model, it is not improbable that we may learn the design of the more ancient structure from the known use of the more modern.

For instance, the description given by the early explorers, such as Ferdinand de Soto and his attendants, by Cabeça de Vaca

and Garcilasso de la Vega, will apply only to the native tribes which then occupied the regions bordering on the Gulf of Mexico and the lower Mississippi; but it has been maintained by later travelers and investigators, such as Adair, Bartram and others, that these races were occupying the same works which a preceding race had built. Such was the tradition of the natives themselves, and such also was the impression which the early explorers gained. At times "these ancient tumuli," as Col. C. C. Jones maintains, "were subjected by the later tribes to secondary uses, so that in not a few instances the summits and flanks of large temple-mounds, originally designed for religious objects, such as the worship of the sun, were by the Creeks and Cherokees converted into stockade forts, used as elevations for council lodges and the residences of their chiefs, or devoted to the purposes of sepulture." (See *Antiquities of Southern Indians*, by C. C. Jones, p. 126.) Yet at other times the erection of a rotunda on a mound of "much ancients date than the building itself," or the location of a "chunky-yard" in the midst of an earthwork whose builders were unknown to the natives, might illustrate the original use of these structures as nothing else could. There is, to be sure, a difficulty in thus reasoning, for the natives themselves "are often as ignorant as we are, by what people or for what purpose these artificial hills were raised" (Bartram's *Travels*, pp. 355-356), and the various stories concerning them at the best "amount to no more than mere conjecture, and leave us entirely in the dark;" yet it is certainly fortunate for us that the races which occupied these works and were the survivors of the successive populations which preceded them, have been so well described by the various historians. Civilization does not and cannot give us any clue to the use of these prehistoric structures. It is only by the study of the savage races that we understand the rude stages of society which existed when they were erected, and thus by a system of gradual approach, we come to appreciate and realize something of the condition of the races which then lived. Had we no other criterion to judge the strange and mysterious works which are found on this continent than that furnished by our modern houses and public buildings, we could not understand them, but we have the means furnished by history.

Even the barbaric architecture of other lands is a better aid to the understanding than the civilized. At times we find an advantage in going back to the ancient history of the world, and in the descriptions of the early patriarchal times, or in that given by Homer of the tribal state, or by Cæsar and Tacitus, and other historians of the early nomadic tribes of Europe, we gain some conception of the state of society in this very early



period of American history. But nothing assists us so much as a familiarity with the savage and semi-savage life of the tribes existing in the very localities which we are studying. It is remarkable that the structures of the races which succeeded one another on American soil resembled one another so closely. This is so in the ancient Asiatic history. It is so in America.

As we read of the successive occupations we may perhaps understand the earlier conditions. The customs of one race fitted into one framework will give us the picture for the frame left by another people. We may take the historic picture out from the structure in which we find it and place it in the works of the prehistoric people, and observe that it is to a degree descriptive, and a truthful likeness of both ages. These likenesses of the prehistoric ages we often meet with in early American history. We have only to read some of the descriptions given by the voyagers or explorers to understand the use of many of these works which seemed so mysterious. Even those mounds and massive pyramids and earthworks which seemed so strange in their design may become plain to our minds, and the life thus put into them may speak to us of the days that have passed. Thus it may be, that the different classes of works, the military and religious, the agricultural and village, and even those designed for games, for funerals or other ceremonies, will yet be understood by the study of the customs of the people who survived the builders of these structures. We may, indeed, need to study the history of these tribes much more closely than we have done, yet it is not impossible that when we come to understand the religions of these Indians, we shall also understand the religious structures of their predecessors; when we know their military habits and customs we shall realize something of the military system which ruled in the erection of the military and defense works; when we know more of the agricultural and domestic life, we shall be able to explain the uses of many of the relics and the works; and when we have become acquainted with the social status and the village life of the tribes which history makes known, we shall know more of the many village structures and communistic houses which are still in existence, though so often in ruins and without inhabitants.

Our great work, then, is to study the still surviving races that we may better understand those which have passed away.

II. We turn, then, to the second source of information, and examine the testimony of physical geography.

There are three maps of the country which the archæologist should have before him. One is the historic, the other the prehistoric, and the third the pre-prehistoric or physical map.

The historic represents the tribes of aborigines, as they were located at the times of the discovery up to the Revolution. The prehistoric represents the location of the earthworks and other remains as they are now found, but which probably were left by the races which existed before the discovery. The physical represents the natural face of the country as it existed before man inhabited it.

Now of these maps the first and the third are known, and they are to be studied to give us information about the second. The ethnological map and the geographical combined may throw some light upon the archaeological.

In the maps constructed by the author, the historical and the geographical have been shaded in similar colors, to show the correspondence between the physical geography and the condition of the later races. The archaeological was shaded with the same colors, the character of the works being designated by the colors. For instance, in the ethnological or historical map, the great Algonquin race, a nomadic people, are represented by the green, and this corresponds with the high forest land of the physical atlas. The yellow represents the Mobilian nation, an agricultural race which dwelt in the region of the Gulf States, and this corresponds with the yellow or green of the physical atlas, indicating the rich alluvial soil of those states. The blue represents the great Dacotah race, and the varied colors represent the Mandans, Flatheads, and other tribes west of the Rocky Mountains, while those on the Pacific coast are also shaded into one another.

The archaeological map has been shaded according to the character of the works; the green representing a preponderance of military or defensive structures, and the yellow representing the structures of agricultural people, consisting of isolated mounds and pyramids, and a light shade, which represents the distribution of that complicated system of earthworks and mounds, the preponderating type of which are the sacred and emblematic. The brick color represents the Pueblos of the West, and the red represents the stone ruins of Mexico and Central America.

Now, the correspondence of these three maps is the point for us to consider. Do the works of the prehistoric times show the effects of the soil and climate in their design and general structure, and is there any such correspondence to the ethnical traits of the historic tribes? Is the key to the three series of maps found in the physical geography?

As we read of the character of the tribes situated in the different localities, do we find a correspondence between their status and social condition and their physical surrounding? This may not be as apparent on this continent as on others. The country

is too continuous for the geographical features to impress themselves upon the races. The mountain ranges run in the wrong directions to mark the zones of climate by any physical barrier. If there is any effect upon the people, the barriers between the nations are not sufficiently distinct to make this perpetual. The nations have not been kept shut in to the effects of these local causes so as to make separate races. The geographical divisions have not made ethnical differences. In Europe, Asia, and Africa the geographical barriers are so marked that they have made racial distinctions which can never be obliterated. There the effects of climate, soil, food, and mode of life are so apparent that now the most natural, and perhaps the most scientific, division of the races is that of Asiatic, European, and African. Whatever we may say about the historic origin of these races, yet as far as the physical characteristics of the people of the eastern hemisphere are concerned, this is the most distinctive and the most natural. But if we adopt the more common classification given by Pritchard and Blumenbach, into Mongolian, Malay, Caucasian, African, and American, we find the correspondence in the colors of these respective races to the physical barriers of the countries which they inhabit. We may not explain it, yet such is the fact. The Mongolians, or the yellow races were the inhabitants of the high table lands of Mongolia and Independent Tartary. The brown races were, on the other hand, the inhabitants of the low plains and islands of the Torrid zone. The white or Caucasian race were originally mountaineers, of Caucasus, but afterward settled in the northern highlands of Asia the forests of Europe, while the negroes, or blacks, were always the inhabitants of the great continent of Africa, where both the effect of climate and soil conspired to produce and perpetuate the physical qualities for which they are distinguished. As to the red or American race, the very fact that this distinction has been recognized, and that the race extends across the two continents, proves in itself that on the western hemisphere there is an exception to the general rule. The racial characteristics here extend through all the geographical barriers, across the various belts of latitude, and we find an homogeneous character in the inhabitants of the entire hemisphere.

According to that classification which designates the American as the red or copper race, the physical geography of the country has produced no ethnical lines. In other respects also, it is apparent that the physical geography has not made any marked ethnical differences. It was the opinion of Dr. S. G. Morton, after a long study of the skulls of the American races, that there was no racial distinction between the inhabitants of this hemisphere. This opinion may not be entirely tenable, and even was held with some

uncertainty by that distinguished ethnologist; for the differences between Peruvians and Mexicans, and between the Aztecs and red Indians, are too manifest; but the idea that the racial peculiarities of skull or skeleton were caused by the geographical surroundings has never to our knowledge been maintained. With the single exception of the Esquimaux, whose pyramidal head and squat form have been assigned to their fish diet and peculiar hyperborean life; no race on *this* continent has been assigned to its locality and there recognized as a creation of its own environment, a human race belonging to an earth-mould.

There is, however, one respect in which we may recognize the effects of the physical surroundings, and that is in the state of society. There is, indeed, a correspondence in this respect between the population and the physical geography. This was so in the condition of the later aboriginal races, and we may suppose it was also so with the earlier prehistoric races. There is even now with the surviving races more or less of a correlation between their mode of life and the country which they inhabit, and the history of the tribes which have been removed from their original seats indicates the same thing. The works and remains, also, of the preceding populations indicate this same correspondence.

For instance, in the mountain region of the Cumberland, in the hill country of the upper Ohio, in Western Virginia, Pennsylvania, and New York, we find a class of works which have been generally classified by the name of military or defensive. A few works of the same kind have been found throughout New England, along the banks of Lake Erie, in various parts of Michigan, and, in fact, wherever there are forests covering the mountains or lining the rivers and the lakes. It would seem, then, that this kind of structure was peculiar to the hills and the forests of the East. The mode of life in these regions was military. It was a necessity of their very situation. Here was the effect of nature upon the state of society which was inevitable. These works were military and defensive, as from the nature of their surroundings they must be. The forests gave too much opportunity for treachery to avoid it. Human nature, when dwelling in such circumstances, would develop in this way. It made no difference what tribe dwelt there, there was a necessity for military habits. We can picture to ourselves exactly the condition of society. Whether the same tribes inhabited these regions, or whether they were different, their mode of life was dictated by circumstances. There were no means by which the people should overrule the force of nature and gain control of her elements. It was one of the peculiarities of prehistoric society that it was conformed altogether to nature. Civilization alone overrides the difficulties and makes the forces of nature

obedient to her wants; but the prehistoric races succumbed to circumstances, and were conformed in their condition to their environment.

We call these military structures comparatively modern, but we do not know how long they continued. If there were those who led a different life, they were probably located in the valleys or on the borders of the streams, just where we find a few agricultural works. But the vast majority of works, whether very ancient or more modern, are of the same class—military and defensive. Over three hundred of these military structures are found in the single State of New York; and scattered over the mountains of Virginia, and Eastern Tennessee and Kentucky, and everywhere where the hunting life and the warlike and predatory state would be most likely to prevail, there these military and defensive structures are found.

Just as the military or warlike tribes of the historical Indians have been identified with the forests and the mountains, so these military structures of the prehistoric races are found in the same localities.

The Iroquois, the Wyandots, and the Eries were a warlike people. The Cherokees were also warriors, and may be regarded as the mountain tribes of the East, while the Delawares and some of the tribes of the Algonquins, inhabiting New England and the northeastern States, led a mingled life, partly agricultural and partly hunting. Thus we have in these localities at least, a correspondence between the state of the population and the physical surroundings, and we need, therefore, to shade the three maps alike. It is so elsewhere, also.

It has been intimated already that there were several grand divisions of the prehistoric population on this continent, but we shall find that this division is according to the social status rather than any ethnic traits.

The ancient populations of the Atlantic coast have left one class of structures behind them, the Mound Builders of the Mississippi Valley another, the Pueblos of Arizona and New Mexico another, the uncivilized races of the Pacific coast another, and the civilized races of Mexico still another. Whether these works were modified, both in their material and in their shape and character, by the physical features of the separate regions or not, the differences in the works are manifest. Each class of ancient works suggests a mode of life different from the other, and the great work of the archæologist is to trace the correlation between this mode of life and the geography of the country. To one who is familiar with the laws which govern human population, and who has observed the effect of the physical upon human nature, this is not difficult. But as an evidence of the prehis-

toric status the subject needs to be studied more attentively. In the grand divisions of the globe, the ethnic divisions follow these physical barriers, but the minor divisions are more difficult to trace, but these may be seen in the various portions of this continent very distinctly.

We in America need only to look over the map and learn the general physical characteristics of each section if we would know what the state of society was in the prehistoric ages. If the hunter life prevailed in the forests, the nomadic life on the prairies, the agricultural on the rich plains and in the alluvial bottom lands of the Gulf States, if a high state of civilization existed among the rich plains and valleys of Mexico, and the Pueblos or rude village life prevailed in the interior of Arizona and New Mexico, it is probable that these were the conditions of society in the prehistoric period. Not that society develops altogether according to its environment, for there are nations that have conquered even the forces of nature; but among the primitive people we must acknowledge the supremacy of the physical causes in giving shape to their state and condition.

Whether the tribes naturally were modified and grew into their earth-mould, or according to their own elective affinities they made choice of localities to suit their ethnic traits, there is certainly a correspondence. Civilized races may have come into this continent and found lodgment in the rich valleys of Central America; the wild tribes from Mongolia and the high plains of Eastern Asia may have wandered until they found the hunting grounds to suit them; the nomads also may have sought the open prairie on the same principle that the northern Hyperborean of the arctic region sought the latitude which he was used to as a habitation; but the geography of our country is dotted with these works of the prehistoric races, which have a wonderful correspondence with their surroundings.

There are, to be sure, according to this theory, some things difficult to account for. In the first place, the later races discovered in those sections were very different from the earlier. There are certainly ethnic traits witnessed in these regions crowding out and overwhelming those which were naturally developed. Different nations having radically different peculiarities have been run into the same environment and may have produced very different states of society.

The warlike hunter Algonquin came upon the peaceful Mound Builder and displaced him. The village life of the Ohio valley disappeared before the incursions of those northern barbarians, just as the civilization of Rome went out under the incursions of the hordes of Goths and Vandals. The Pueblos of Arizona and Utah and Colorado are also occupied by a new race, and the wild

Comanche, the Ute and Apache roam amid the ruins of a higher civilization than they ever knew. Yet, as a general thing, we shall find that this correspondence proves true. Especially if we look away from the later races to the earlier, do we see the effect of natural surroundings in the conditions of the people. The prehistoric and ancient, furnish a picture which corresponds with the scenery far more than the aboriginal or historic. With them the adaptation seemed to be complete. We have only to people the land with these races, and then draw our inferences from the character of the country as to the mode of life which prevailed, to have a complete picture of the prehistoric period.

III. The third source of information is the Archæological.

We have spoken of the different localities, some of them historic and some strictly prehistoric with their relics and associations.

We have also referred to the correspondence between the physical surroundings and the prehistoric condition of these aborigines. But throughout the reasoning, it has been apparent that our main reliance must be after all the Archæological Relics or Remains.

These, we are then to consider as our main source of information.

But they are silent. They give no testimony as to the life, which once existed; no history of the races which have departed. They are lonely and deserted, not even a lingering member of the numerous people which once crowded these mysterious structures is left to tell the tale of the past.

We are now obliged to study man through his works, even as we study the great Creator through His grander works. The evidence of design is that which we rely upon in both cases. Like the watch on the heath we study the mechanism and learn its purpose, and then judge something of the maker. It may be a blind method, but the best we have in the circumstances.

The state of prehistoric society may possibly be determined by the examination of cabinets. There are relics there, which are useful. They show to us the arts of the prehistoric people. They point out to us the culture which they had reached. Classified according to our standard they reveal the materials which were at their disposal. They show the mineralogy of the country and that the early people were familiar with it. They show that each tribe employed the material of his own locality for their weapons and implements.

They reveal some small degree of commerce, and the interchange of metals and other materials.

They exhibit the habits of the people, whether agricultural or nomadic or hunting or fishing. They reveal the warlike appli-

ances, also the peaceful arts, and at the same time they make known the advancement of the races.

The very "ages" associated with these relics are suggestive, and the recognition of the bronze, or the copper or the rude stone or polished stone implements will bring a picture of society before the mind.

These relics; as they have been associated with the states of society which history describes, are indeed evidences. They present a picture to the imagination and they bring before us the scenes which have been depicted elsewhere. One stage of society after another runs before us like a panorama.

If we are not familiar with American aboriginal history, if we have read no border tales, and none of Cooper's novels, if we never saw an Indian, and never read about the early tribes in England, or the Germanic tribes in Europe, if we have only read our Bibles, and had some insight into the primitive patriarchial times and the days when Cain dressed himself in skins and went out and built a city, yet these specimens are instructive.

The more we read and know of the rude tribes, and follow the various travellers all over the vast unknown regions of every continent, the more we make ourselves familiar with the different stages of society, whether in history or in contemporaneous geography, and especially as we study into the philosophy of history, and the rise of civilization, the more valuable shall we see these relics to be.

The collection of relics may not seem to be important, or a single specimen appear to be of any particular value, but the data of the science are thus obtained and a single relic may give a clue which shall lead to wonderful discoveries or reveal a whole gallery of prehistoric pictures.

The author was at one time examining one of the Fire-beds on the Ohio river. An old settler and practical observer was with him. We were discussing the probable origin of these shell-heaps and accumulated fragments. Everything favored the idea that they were natural deposits. The situation on the bank of the river, the conformation of the deposit to the surface of the bottom land, the situation at the bend of the river, the traces of frequent floods over the very spot, and the character of the debris all led to the conclusion that it was only a deposit from the river.

We were conversing; the old settler and practical collector giving arguments in favor of the human origin, the author pointing out the natural causes, until the discussion had almost ended with the exhaustion of patience, when suddenly the writer looked into his own hands, where he was holding what he had taken out of the banks, and exclaimed; "I give it all up; you are right; there is the evidence!" and he held up before the other



the fragmentary broken relics of a rude stone hatchet. He had recognized among the dirt, the groove of the handle, and the truth flashed on his mind at once that it was human in its origin.

His scepticism went down before a single specimen. It was a rude fragmentary relic, but it revealed the whole thing to him.

So there are hints given in a silent way by these relics, which shall be like the falling of the apple on the head of a Newton, or the burning of a piece of sulphur to Goodyear, or the last burning of the household furniture to Pallisey, the potter.

The observation which has been trained in the school of experience, sometimes becomes an intuition, and at last siezes the clue and goes on to great discoveries.

The relics which give their testimony may be those of the war-like or of the agricultural or of the village inhabitants; condition may be of wood or stone or copper; they may be weapons or utensils, or implements, or articles of art or apparel, they may be ornaments, or the mere tokens of the games of pleasure, they may contain the more serious and significant religious emblems and embrace idols and images, or the totems and tribal emblems; or possibly inscriptions and symbols, which give traces of the customs, or astronomical views, and chronology of the worshippers. But none of these are without importance and every one must be studied long and close, for the key to the door of these prehistoric mysteries is among them, and no one knows which will unlock the strange secret to our vision. A single bullet found in a mound in Kentucky, determined the age of a class of earthworks which had been studied with great interest, while a sword hilt has been suggestive of the early explorers' encampments.

The antiquity of the races, the different orders of society, the stages of human development, the ethnic affinities, and the whole subject of the prehistoric condition must be learned from these rude relics as the source of information, and as confirmatory of other evidences.

2. There is a second class of archæological evidences on which we rely.

The remains as well as the relics give us testimony upon the prehistoric condition.

The remains and earthworks of this country are divided into several classes, according to their uses or their character. No general classification has ever been given, but thus far they are only enumerated and then described. If, however, we consider the materials as a basis, we may be able to give some order in the classification.

It is proper to observe that there are traces of a numerous prehistoric population scattered over nearly every part of the broad continent. No one who has not made a point of observing,

would understand how numerous these vestiges are, or understand their design or purpose; yet they are here to present their evidence, to invite our study, and we ourselves are at fault if by comparing and analyzing and attending to their testimony we do not understand the tale.

Let any one go forth into the fields and the meadows, into the hills and valleys, and search for these records of the past, and he cannot fail to trace out an alphabet more striking than the hieroglyphics of Egypt, or the inscription upon the buried palaces of the East. These works are replete with a varied story, every where the decaying skeletons and the silent skulls remind us mournfully of the death that has swept over the land; but the remains of fires, the debris of camps, as well as the running stream and sparkling spring from which they drank, all remind us how recently the living have passed away.

As we go through the silent earthworks, and see all the preparations they made, the walls and ditches for defense, the enclosures they erected for worship, and the monuments or mounds they erected for tombs, we are astonished at the great variety, and the wonderful significance.

If there are modes of life which we do not understand, and structures which are still mysterious in their design, yet they are very expressive of the strange unknown life, of the mysterious religion, the wild aboriginal state. It may not compare with our later civilized condition and modern ideas, for they are only expressive of another condition than that to which we are accustomed.

But the picture of the prehistoric condition cannot be excelled.

Let any one visit one of the renowned defenses situated so beautifully on the lofty hill top, and commanding the distant view of stream and valley, of hill and forest, and then look about him and behold the wonderful adaptation for defense and protection, and he will appreciate what were the dangers from the secret foe, and how the war-whoop must have startled the peaceful inmates.

Let him visit again the quiet village inclosure, and see the surrounding wall, and trace the place of palisades, or tread the path to the unfailing stream, and walk over the happy hunting ground and the delightful valleys, and he has a picture of peace which nothing else can give.

Let him then enter the corn fields or the garden beds, or surmount the elevated platform, or enter the ancient courts and courtyards of the agricultural people, and he again has a view of another state of life, which he did not know. Again, let him enter one of the sacred enclosures and look about him and see the altars and the temple platforms, and all the complicated

structures, wherever the social fires were lit and the victims of sacrifice were offered, and even if he knows not the worship that then prevailed, it is not difficult to imagine something of the religious customs of the people.

The grand pageant of the assembled multitudes passes before him as they gather at their annual feasts, or at their religious ceremonies, or their great burials, or for their war expeditions. In imagination he sees in one place the merry-making and the dance, he hears the music and the laughter; but at another he looks upon the smoke and the slaughter and the many mysterious rites. Here he beholds the "very great burning," the solemn mourning, the sacred burial; there he sees the plumed warriors, armed with their stone axes and flint spears and maces, either in fleets of canoes, navigating the waters, or in long lines traversing the forests. Everywhere the scene is suggestive of a life which has passed away. Whether one stands on the lofty pyramids of Mexico, which once reeded with the gore of human victims taken in battle and slaughtered as sacrifice, or among the extensive dwellings of the Pueblos, where such multitudes gathered for defense or for residence, or among the sacred enclosures of the Mound Builders, where a still stranger people once lived and toiled and worshipped—yet each structure is suggestive of a life which once prevailed, but which has passed away, and of the prehistoric condition of this continent.

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ONE of the greatest archæological puzzles in our country is the large flaked flints, usually called leaf-shaped implements. They are from 4 to 9 inches in length, 3 to 5 wide, and about half an inch thick, round at the base, and very obtusely pointed at the opposite extremity, the apex being slightly to one side. They show no signs of use whatever, and are found in masses from a few to many hundreds. Mr. Thomas Rhodes, of Akron, Ohio, has lately discovered a *cache* of these objects about three miles west of that town, under an old tamarack stump, about two feet below the surface, in peat or muck. There were 197 in the nest. The largest is  $8\frac{1}{2}$  inches long by  $3\frac{1}{4}$  wide; the smallest is about  $2\frac{1}{2}$  inches long.

EXCAVATIONS.—The ancient Sipuntum, mentioned by Strabo and Livy, which was swallowed by an earthquake, has, as already announced, been discovered near Mont Gargano, in Italy. A magnificent temple of Diana, ornamented by a portico nearly one hundred feet broad, and an immense necropolis, have been unearthed. The excavations are being made under the direction of the Italian government.

# ON THE ETYMOLOGY OF THE WORD CHICHIMECATL.

BY G. BRUHL, M. D.

To every student of ethnology it becomes more and more apparent, that linguistics have to play a prominent part in solving ethnological problems; nay, that they are often the only means of determining the original home, descent and migrations of a people. It is in illustration of this view that I venture to offer a new etymology of the word *Chichimecatl*, hitherto a puzzle to both the earlier and modern writers, believing as I do, that it may throw a new light on the origin of this so called northern tribe; leaving it, however, to philologists to decide on the correctness of this derivation.

Ixtlilxochitl, who, contrary to most of the earlier authors, claimed for the Chichimecs a language of their own,—a claim sustained by Torquemada, Pomar and Boturini,<sup>1</sup> says that this people derived its name from King Chichimecatl, who brought them to the New World, that the word, however, had to be explained not from the Mexican but from the Chichimec tongue, where it signified "Eagle."<sup>2</sup>

Torquemada, in contradiction to his statement, that the remaining Toltecs did not understand the invading Chichimecs, because they spoke a different language, derives Chichimecatl from the Nahuatl word *Chichilitztli* or *Chichinalitzli* (the act of sucking or chewing), and translates it: "sucker or chewer, because this people ate the animals raw, which they killed, and sucked the blood like from a nipple."<sup>3</sup>

Vetancourt, although considering the derivation proposed by the latter author sufficiently plausible, preferred to derive the word from *chichi* (dog) and explains it with *dog-people* (*gente perra*),<sup>4</sup>

Herrera, declaring expressly that Chichimecatl is a Mexican word, favors a similar derivation, from *chichi* (dog) and *mecatl* (soga, cord) translating it: pack of hounds.<sup>5</sup>

1. Ixtlilxochitl, *Histoire des Chichimeques*, part 1 ch. 13, in Ternaux Compans, *Voyages*. Torquemada, *Monarchia Indiana*, Madrid 1723. Tom. I pag 44—Orozco y Berra, *Carta etnográfica*, pag. 6.—Fr. Piementel, *Cuadro descriptivo*, I. 155. Boturini, *Idea de una nueva Historia general de la Am. Sept.* pag 96.

2. Ixtlilxochitl o. c. part I. Cap. 4.

3. Torquemada, *Monarch*, Ind. Tom 1, pag 39.

4. Vetancourt, *Teatro Mexicano*, Mexico 1870. Tom 1, pag 238.

5. Como si dixesen Perro de Trailla. Herrera, *Historia general*, Madrid 1730. Tom IV., pag 42.

Duran and Acosta assert, that the Chichimecs (*que quiere decir caçadores*) were thus called, because they were a barbarous people and lived solely from the chase.<sup>6</sup>

Veytia, in reviewing the various etymologies proposed up to his time, mentions first the derivation from *chichen*, a chieftain or city, and *mecatl*, here as syncope of *mecayotl*—kin, consanguine relationship, i. e. kin of *chichen*, and then from *chichina*, to suck, and *mecayotl*, those who suck their own blood or that of their kindred. But still he adopts the opinion of Ixtlilxochitl, that their first King Chichimecatl gave his name to the tribe, adding the assertion of the Tezucan historian, that since that time it became the custom of these nations to assume the name of their chieftains.<sup>7</sup>

Buschmann, the learned Aztec scholar, thinks the word to be the gentile noun of *chichimecan* (place of the dogs) from *chichi*, plural *chichime*, and the adverb *can* (endonde, adonde, where) indicating the place.<sup>8</sup>

Lastly, my esteemed friend Mr. Bandelier, the distinguished ethnologist, recognized in the word in question the roots *chichiltic*, red, and following Veytia, *mecayotl*, explaining it: the kin of the red race.<sup>9</sup>

To sum up the various derivations, we observe, that all the authors but Ixtlilxochitl explain the word by means of the Nahuatl tongue, and find in it either of the four roots, *chichen*, *chichina*, *chichi* or *chichiltic*. Beyond any doubt, Mr. Bandelier's derivation is the most ingenious and, influenced by its originality, I have based on it my arguments in a recent pamphlet: *Aztlan-Chicomoztoc*, since it gives the most satisfactory explanation of the fact why the Toltecs, Nahuas and other tribes of the Northwestern immigration prided themselves with being Chichimecs. The only objection against this etymology is, that the compound of those roots would be *Chichilmecatl*, at least nowhere have I found an instance justifying the elimination of the letter L, although it cannot be denied that in the Aztec language very strange syncopes occur.

At any rate we must reject the derivation from *chichen*, since nowhere in the Aztec pictorial writings a chieftain of that name is mentioned, and so far no historian has ventured to bring the barbarous Chichimecs in connection with the famous city of Chichen (Itza) in the North East part of Yucatan, so vividly described by the zealous explorer, Stephens. The derivation from *chichina* and *mecatl* is still less borne out by history, since it was

6. Duran, *Historia de las Yndias* (Edicion Ramirez) Cap. II, pag 13.—Acosta, *Historia natural y moral*, Madrid 1606, pag 453.

7. Mariano Veytia, *Historia Antigua de México* (edic. Ortega) Tom I, pag 139-42.

8. Buschmann, *Ueber die Aztekischen Ortsnamen*, page 79.

9. Ad. F. Bandelier, On the distribution and tenure of Lands, in the XI. annual report of Peabody Museum, pag 392-4.

not the Chichimecs who introduced the cruel custom of human sacrifices, but the Aztecs, the last immigrants into the tableland of Anahuac.

If we admit the correctness of Herrera's or Vetancurt's etymology, we are compelled to concede, either, that the denomination Chichimecatl was given as a nickname, of which we have an analogy in the word Moqui, meaning a decaying carcass, or, that the Mexican tribes like the northern Indians called their "gentes" from animals. But, although this rule holds good regarding the latter tribes, there is not a single instance on record that any other people of Anahuac received its appellation in this manner. On the contrary, all of them adopted it from the products of the soil, or from some peculiarity of their place of settlement, or of their manners, habits or character. Thus the Toltecs were named from the city of Tollan (place of rushes, tolin=rush); the Aztecs from Aztlan (place of herons, aztatl=heron); the Tlahuicas from tlahuitl (cinnabar), a mineral found in great abundance in their territory; the Tlascaltecas from Tlascallan (place of the tortillas, tlascalli part, pass. of ixca, to bake); the Xochimilcas from Xochimilco (place of flowers, xochitl=flower, milli=piece of ground, heredad, ager), because they were particularly engaged in raising these beautiful children of nature. The Popoloca, one of the oldest tribes on Mexican soil, were so named from their stammering mode of speaking;<sup>10</sup> the Mixtecas, equally an ancient people, from Mixtlan (place of clouds, mixtli=cloud); the Otomies from their roving manner of life (otho=nada, nothing; mi=quieto, quiet, nothing quiet, roaming about,<sup>11</sup> not from otomitl or oton, a chieftain, as Motolinia and Sahagun will have us believe.<sup>12</sup>

According to this method of naming the ancient Mexican tribes, Buschmann's derivation of Chichimecatl from chichimecan would be quite logical; but the erudite linguist admits very candidly himself that the rule would require to affix the adverb of place, "can," to the simple stem chichi, and not as it had to be done in this instance, to the termination of the plural, although he quotes *Totomixtlahuaca* (from totome, plural of tototl, bird), as a parallel.<sup>13</sup>

This reason induced me to look around for the purpose of discovering in Chichimecatl something more appropriate than "dogs," and I recognized in it the roots *chichic*=bitter; and *metl*=maguey (Agave Mexicana). Consequently its meaning would

10. Vide Frantzius German translation of Palacios San Salvador and Honduras, pag 64.

11. V: Franz. Pimentel, Cuadro descriptivo y comparativo, Tom. I, pag 118.

12. Motolinia, Hist. de las Indias, de la N. Espana in Collec. de Document, para la Hist. de Mexico, publicad. por I. G. Icazbalceta I, 9.—Sahagun, Hist. general de las cosas de N. Espana (edic. Bustamante) III, 122.

13. Buschmann, Aztekische Ortsnamen, pag 81. "Con nombre plural nunca se junta postposicion " Fr Pimentel, Cuadro descr. y compar. I, 206.

be *place or country of the bitter maguey*, and that of Chichimecatl, *inhabitant of such a country*.

Now, according to Decandolle, the great botanist, Mexico is indeed the botanical home of this plant, and following the rule observed by all the tribes of Anahuac, the aborigines of that country very logically would call themselves inhabitants of the country of the bitter maguey, that is, *chichimeca*.


This conclusion agrees exceedingly well with the reports of Motolinia, Duran, Acosta, Herrera, Garcia and the Codice Ramirez, all of whom consider the Chichimecs the aborigines or first masters of that country, whilst the other historians date their arrival after the destruction of the Toltecan Empire.

It is true in adopting this etymology, corroborated by the accounts of the authors just quoted, all the fanciful stories of the invasion of the great Chichimec Xolotl and those of the mighty Chichimecan Empire in the North, as depicted in glowing terms by Ixtlilxochitl, Torquemada and Veytia, will fall to the ground, but truth is as bitter as the maguey and it will do no harm if the colossal heaps of rubbish which at present cram our aboriginal history were once for all removed. Whoever reads those marvelous stories must be struck by the enormous incongruities and exaggerations with which the imagination of uncritical writers has adorned them.

The invasion of an army of more than one million warriors, women and children not counted, who settle and live without sowing and reaping, merely from the chase, in a small devastated territory where hardly ten thousand hunters could subsist for a short space of time; an Emperor governing his savage people more than a hundred years, and establishing a feudal empire,—more typical and complete, as Mr. Bandelier expresses it,—than the feudal institutions of England; an immigrant from a foreign land, not speaking the Nahuatl tongue and still bearing a Nahuatl name, he himself, his son and his daughters; a people wild, naked and barbarous, unacquainted with agricultural pursuits, living in caves and small huts of straw, and yet coming from a powerful civilized northern empire, with a populous flourishing capital, and God knows how many cities of lesser importance and splendor,—such are the childish absurdities which pass under the name of history. But if my etymology of the word Chichimecatl will stand the test, it will do away with the fancies of enthusiastic writers and sustain the plausible statements of sober historians.

STONE TUBES—SUGGESTIONS AS TO THEIR  
POSSIBLE USE.

BY M. C. READ, HUDSON, O.

Oviedo, who visited America shortly after its discovery by Columbus, and published a "Natural Historia de las Indias," which was printed in Toledo in 1526, is probably the earliest writer upon America who uses the word *tobacco*. In the second edition of his book, printed in Seville in 1535, under the heading of the Tabacos or Smoking of the Indians of the Island of Hispaniola (Hayti), he says: The Indians inhabiting this island have, among their other evil customs, one which is very pernicious, namely, that of smoking, called by them tobacco, for the purpose of producing insensibility. "This they effect by the smoke of a certain herb, which, so far as I can learn, is of a poisonous quality, though not poisonous in its appearance. It is about four or five palms high; the leaves, which are large and broad, are soft and downy, and in color it resembles the plant called *buglos* by doctors and herbalists. The manner in which they use it is as follows: The Caciques and principal men have small hollowed sticks, about a span long, and as thick as the little finger. They are forked in the manner here shown,  but both forks and the stock are of the same piece. The forked ends are inserted in the nostrils, and the other end is applied to the burning leaves of the herb, which are rolled up in the form of postils. They then inhale the smoke till they fall down in a state of stupor, in which they remain as if intoxicated, for a considerable time. Such of the Indians as cannot procure a forked stick, use a reed or hollow cane for the purpose of inhaling the smoke. Their smoking instrument, whether it be forked or merely a hollow cane, is called tabaco by the Indians, who do not give this name to the herb, nor the stupor into which they fall, as some have erroneously supposed," etc.

The above quotation is taken from "A Paper of Tobacco," by Joseph Fume, a rare book, printed at London by Chapman and Hall, in 1839, which gives many interesting particulars of the introduction and use of tobacco in Europe.

This novel mode of inhaling the smoke by means of a tube held over the burning tobacco, suggests a probable use of the elaborate stone tubes frequently found in the valley of Mississippi. Such tubes, it is well known, have been used as pipes by some Indian tribes, but are not well adapted to this use, which probably came in vogue after the general introduction of the pipe.



It may be noted that the earlier English references to the use of tobacco show that the smoke was usually swallowed, or rather inhaled, and the act was called not smoking, but drinking tobacco. as in the following:

"The Indian weed, withered quite,  
Green at noon, cut down at night,  
Shows thy decay,—all flesh is hay:  
Thus think, then *drink* tobacco."

It is the manner of inhaling the fumes from a wisp of burning tobacco held in the hand, which indicates a possible use of the stone and pottery tubes found in the Mississippi valley. These are sometimes straight, and sometimes with a larger orifice at the mouth. The end of the tube may have been applied to the nostrils, or held in the mouth while inhaling the fumes of the tobacco.

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## CORRESPONDENCE.

### BURIAL CUSTOMS.

#### BURIAL AMONG THE MIAMIS.

*To the Editor of the American Antiquarian:*

The tribe occupying this locality at the advent of the whites was the *Miamis*, having their principal seat of government at "*Kekionga*," now Fort Wayne, at the junction of the St. Mary's and St. Joseph's rivers, where they unite to form the Maumee (a corruption of the word *Miami*).

Three forms of burial have been noticed as belonging to the modern Indians in this locality.

1. The ordinary ground burial in a shallow grave, prepared to receive the body in a recumbent position. In these graves are usually found flint arrow and spear heads, occasionally stone axes and hatchets, pipes, shell and glass beads, some copper ornaments, and silver brooches and trinkets. The copper and silver ornaments are confined to comparatively late burials, since the advent of the whites. Sometimes guns, knives, and hatchets of civilized manufacture are found in these graves.

2. The surface burial in a hollow log. These have been found in heavy forests. Sometimes a tree has been split and the two halves hollowed out to receive the body, when it is either closed with wythes or confined to the ground by crossed stakes; or sometimes a hollow tree is used by closing the ends.

3. The surface burial, where the body was covered by a small pen of logs, laid up as we build a log cabin, drawing in every course until they meet at the top in a single log.

I cannot learn that any implements have been found in these graves. In the ground burials there are generally found remains of jars and dishes of pottery, and in the later ones copper and iron kettles, indicating the placing of food and water with the remains.

In regard to the more ancient burial customs, those of the Mound Builders, we of course know nothing, except as disclosed by the mounds themselves. All through northern Indiana are scattered burial mounds. In those I have personally examined, in this and neighboring counties, I find a great diversity. Some contain the remains of numerous skeletons, or fragmentary skeletons, which have among them many calcined bones. Others have been the burial place of but one individual, while others have held two or three. Those mounds which contain from one to five rarely show any signs of cremation, and usually have the accompanying arms, utensils, and ornaments, with one or two earthen vessels for food, etc., while those in which the remains are more numerous seldom have anything except broken fragments of pottery and flints. Sometimes the burial is in a recumbent position, and sometimes a sitting posture. The indications of fire, in the form of ashes and charcoal, are found in every mound I have seen opened, but it does not always indicate the practice of cremation.

For further details of the aboriginal remains, I would refer to three articles published in the Smithsonian Report for 1874, entitled, "Antiquities of Laporte County," "Antiquities of Allen and De Kalb Counties," and the "Troglydites of Breckenridge County, Ky." Also to a memoir of the Mound Builders which will appear in the *Compte Rendu* for 1877 of the Congress International des Americanistes, held at Luxembourg, Sept. 10-13.

R. S. ROBERTSON.

FT. WAYNE, IND.

#### BURIAL AMONG THE CHOCTAWS.

*To the Editor of the American Antiquarian:*

I find this described by many early European residents among the Choctaws, and particularly recorded in Pickett's History of Alabama, but as it was peculiar, and not common to other tribes, I prefer giving the account of the late Rev. Israel Folsam, himself a native Choctaw, and in everything reliable so far as the record of facts is concerned. In the manuscript which he left at his death he says:

"The mode of burial practiced by the Choctaws consisted in placing the corpse five or six feet from the ground upon a platform of rough timber made for that purpose, covered with a rough kind of cloth of their own making, or skins of wild animals, and bark of trees. After remaining in that condition until the flesh

had very nearly or altogether decayed, the bones were then taken down by the bone-pickers—persons appointed for that duty—and carefully put in wooden boxes made for that purpose, which were placed in a house built and set apart for them. These were called bone-houses.

"Whenever they became full, the bones were all taken out and carefully arranged to a considerable height somewhat in the form of a pyramid or cone, and a layer of earth put over them. This custom, which prevailed among many different tribes, is no doubt the origin of the Indian mounds, as they are generally called, which are found in various parts of the country, particularly in the State of Mississippi, formerly the home of the Choctaws. When the custom of placing the dead upon platforms was abandoned, which met with strong opposition, they buried their dead in a sitting posture in the grave; around the grave they set half a dozen red poles about eight feet high, and one about fifteen feet, at the top to which a white flag was fastened. The occupation of the bone-pickers having been abolished, it then became their business to make and set up red poles around the graves, and afterwards to remove them at the expiration of the time of mourning, and hence they were called pole-pullers. They were respected by the people, and far less labor being imposed upon them, they were pleased with the change in the burial of the dead. At the pole-pullings, which, as stated, were at the expiration of the time of mourning, a vast collection of people would assemble to join in a general mourning. After much food had been consumed, they would disperse to their respective homes, and the mourning relatives would oil their hair and dress up as usual."

On the above I have this remark: When Israel Folsam related anything pertaining to the history of his tribe he was accurate, and I prefer him to any author who was not a Choctaw; but as to his "opinion" about the origin of the mounds in the Mississippi Valley, I would prefer that that should be an open question until we receive more light. That modern tribes of Indians have used these artificial mounds as places of burial is not denied,—we have abundant evidence of that fact,—but that they or their ancestors were "the Mound Builders" is not yet in proof. I am satisfied that the Choctaws and Creeks have not been 500 years in the Mississippi Valley, and that the mounds were here when they came. Mr. Maxwell, in his Historical Address, says:

"My conviction is that the high grade of military engineering skill displayed by the Mound Builders at Carthage, Ala., attests a knowledge of the necessities of attack and defense unknown to the mode of warfare practiced by the tribes found here by De Soto. The mounds, also, which I have seen in Ohio, and the

recent discovery by Dr. Foster of woven cloth, showing that the art of spinning and weaving was known to the Mound Builders, proves beyond a doubt that a more civilized race than the Indians found here by the Spaniards have occupied this continent in the ages that are gone.

"Who the Mound Builders were it is impossible to determine. They were not built by the ancestors of the tribes found here by De Soto, as they pretended no knowledge of their construction, traditional or otherwise. The only tradition they had or have is, that their forefathers found the mounds here when they emigrated from the Mexican Empire to the east of the Mississippi river, exterminated the ancient inhabitants and appropriated the country, so that we are compelled to go back to remote ages for the only reasonable solution.

"Prescott says (Vol. 2, pp. 368 and 391) that 'the ancient Aztecs, long before the days of Montezuma, had a tradition that when they entered the Mexican valley they found similar mounds,' containing just the same kind of materials as I found in those at Carthage, and that 'two of the largest had been dedicated to the worship of the sun and moon, while the smaller ones (which, like those at Carthage, were in close proximity) were dedicated to the worship of the stars, and served as sepulchres for the great men of the nation besides; and that the plain on which they stood was called "Micoati" or "The Path of the Dead,"' and he adds that 'now, when the laborer turns up the ground he still finds numerous arrow-heads and blades of obsidian, which attest the warlike character of its primitive population.'"

So much for Mr. Maxwell, and the other side of the question; I prefer to leave it still open for investigation until greater pains shall have been taken to explore the archæological wonders of this country.

Of one thing we are sure, after this digression, the Choctaws loved the bones of their ancestors and of their people. This love unlocks the mystery of their funeral rites. They believed in immortality and eternal life; and such was their veneration for their dead that they picked the flesh from their bones—knowing that they could not carry all their remains—and when they were forced to remove from one place to another, it was the business of certain appointed persons to carry these bones with them until they could be again deposited in a place of rest and safety.

The belief that the souls of the departed tarried several days near to their bodies, and in the vicinity of their mourning friends was common to both Creeks and Choctaws, so that the custom of keeping watch for four days was also common. Among these tribes, when any one died, provisions were prepared for the journey, and sometimes placed on the grave after interment,

under the notion that, before reaching the good land, the deceased was still subject to hunger. I think it cannot well be denied that all Indians believe that the spirits of at least such animals as are useful to man are immortal, for when a hunter died his dog was killed that its spirit might accompany that of its master; and for the same reason, after horses were introduced among them, his horse was killed, that the deceased hunter or warrior might ride in the good hunting ground. But during all the while that a departed spirit was supposed to tarry about the mourners, they kept a fire constantly burning a few steps from the tent or cabin of the deceased, at any season of the year, for, unless this was done, they imagined that their departed friend might be distressed or angry, especially if the nights were cold, dark, or stormy.

The time of mourning was regulated very much by the rank or position of the deceased during life. When a chief died, the sorrowing relatives indicated their grief in various ways for full six months or more. The men were generally subdued or silent, ate but sparingly, and abstained from all usual displays of ornaments of paint and dress. The women were more demonstrative, but remained at home, prostrated with grief, frequently wailing and uttering heartrending exclamations of sorrow, their hair streaming over their shoulders uncombed and unveiled, as they tossed themselves back and forth, expressive of grief. On the loss of an infant, its heart-stricken mother kindled the sacred vigil fire and sat by it all night long, sad and lonely. On the loss of a husband the wife performed the same sad vigil; and in all such cases a repose was not allowed nor desired. From night to night the mourners kept the sacred fire burning, and, seated on skins close to the couch of the departed, or else close to the place of burial, they would keep up their vigil, the stillness of grief being interrupted by piercing groans and cries, until the disembodied spirit had taken its departure, as they supposed. During this time, also, according to the early accounts of Europeans who first visited the Choctaws, the relations assembled; weeping, and in piteous strains made many inquiries of the deceased relative or friend, according to age or sex. "O! why did you leave us?" "Were you not content with your children?" "Did you not have corn enough here?" etc. In the case of noted men who died, hired mourners were frequently employed to increase the importance, and to add to the solemnities of the funeral.

EUFULA, IND. TER.

H. F. BUCKNER.

#### BURIAL MOUNDS IN THE OHIO VALLEY.

*To the Editor of the American Antiquarian:*

Of the burial mounds there seems to be a great variety. This fall (1877) I happened to be present at the opening of a couple

of mounds in Jackson County. One was about a foot high. In this was found the remains of a human body, accompanied with charcoal and burnt stone. The bones were in such a state of decay that they went to pieces almost immediately. The other mound was about twenty steps off. Much larger. Probably two feet high. The deposit was about the same as the first mentioned, only that the remains were encased, or, rather, *covered with a layer of baked clay*, so hard and solid that the pick would hardly take hold. Last winter my attention was called to a mound partly opened by a farmer. In plowing over a low mound he struck a stone with his plow. In removing it he found another, and another, until he had taken out nearly a wagon-load. Fortunately night came on, and he left the job unfinished, and I got a chance to see it before any thing more was done to it. The mound was about three feet high, and eighteen feet at base. The stones taken out were about a foot wide, eighteen inches long, and two inches thick. *They were placed on end, leading toward the centre*, thus forming a tomb about six feet long. In the cavity was found charcoal, burnt bone, stone, and some fragments of flint. Outside of the casing of stone there was no evidence of fire. What few fragments of bone we found were so charred that it was impossible for us to form any idea as to what they had been. The conclusion that I came to about the mound was this: That this oven-like tomb had been built over the remains, then fired until all was consumed, and then covered with earth. The only account I have ever seen of a find anything like this, was one opened by E. G. Squiers, in which was found a large number of large, rough, discoidal-shaped stones, all standing on edge.

Another class of remains that are very common in our county are the *cairns* that are found on every prominent hill-top all over our valley. These are generally called watch-towers, or signal-stations. Yet I know of several of them having been opened, and in every case there has been found human remains, and sometimes stone relics. In many cases there are two or more of the mounds or cairns in a group. And again we find them within gun-shot of each other. These things, in connection with the finding of skeletons, etc., do not go very far toward proving the theory of signal stations. But what interests me most in the way of prehistorics in our county is the finding of human remains in the *gravel beds* underlying the terrace occupied by the Mound Builders. There may be nothing particularly remarkable about this, but I can't understand why they should be found just in the gravel and nowhere else. These finds were very common some years ago. A physician of this place, Dr. Catlin, used to go out with a young collector and dig for these bones—the Dr. to get bones and the collector curiosities. At

one time they found a skeleton with the tap root of an oak tree growing through the chest. The Dr.'s estimate of the age of the tree was 300 years.

PORTSMOUTH, OHIO.

Resp'y, T. W. KINNEY.

#### BURIAL MOUNDS IN THE MISSISSIPPI VALLEY.

*To the Editor of the American Antiquarian:*

A great many mounds are found in this vicinity. Not mentioning the many which we have examined heretofore, I will endeavor to describe one opened on the 21st of July, 1877, which on account of its contents excites our interest somewhat. Beginning opposite this city in Illinois, there is a continuous line of mounds running fully twelve miles down the river, in a south-westerly direction. They border the high bluffs and extend back one and one-half miles in some places. They are all covered with heavy timber, and it is very difficult to get their correct position. The one under notice is one of five, all large, and situated upon a hill almost at the extreme upper end of the series. They are not arranged with any noticeable regard to position. We went to work at the smallest. Two of the others had been formerly opened in a careless manner. We deviated from the usual manner of opening, viz., by a trench, and proceeded to reduce it to a level with the surrounding surface. At a distance of two and one-half feet from one side of the mound, and a little below the natural surface, and fully four feet from the centre, we discovered the remains of three bodies. With great care we were enabled to see their positions, and preserve a part of the skull and large bones of the legs and arms; also part of the bone of the jaw with teeth. *On the head of the middle body was deposited an earthen pot*, in size about two quarts, which had been crushed by the weight of earth. There was nothing in it, but immediately surrounding it were lying some half-dozen flint arrow-points of curious construction, unlike any that have been found in this locality. There isn't one like them in my collection of about one thousand arrow, lance, and spear heads. Three in particular are different, although they may be very common in other regions. They are now in the Academy of Science rooms in this city. These are the first implements of the flint kind that have been found in mounds in this locality. Copper has been found, but no flint. I understand that they are seldom found this far south, more particularly implements that would serve in war, but are met with quite frequently further north. The points mentioned above are from one to two and one-half inches long. We also found a very nice pipe of slate stone in this mound. I have succeeded in restoring the pot and a part of one of the skulls. The skull shows a very retreating forehead, with very prominent and heavy superciliary bone.

MUSCATINE, IOWA.

Yours sincerely, THERON THOMPSON.

## BURIAL MOUNDS IN MISSOURI RIVER VALLEY.

To the Editor of the American Antiquarian:

I have heretofore given you a short account of the vestiges of the ancient Mound-builders, remaining in the Missouri River Valley, in the north-western portion of the State of Missouri, a description of their mounds, and of the various articles of pottery found in them. Since my former letter I have made further examination of them, in hopes of finding human remains not entirely decomposed, but have only succeeded as before in finding the teeth. They are of such ancient date, that the bones have literally become dust. The fragments of pottery recently found, correspond nearly in description with those mentioned in my former letter, only that every separate article is differently embellished. On the outside of all the smaller dishes there are some attempts at ornamentation, many requiring considerable skill and taste, though I found no attempt to delineate any natural object, such as a leaf, vine, twig, or animal.

Levi Crouser, a resident of Holt County, in prospecting for mineral on his premises, in Section 14, Town 57, Range 38, dug two tunnels into the bluff, a distance of two hundred and fifty feet each. Commencing the third, and desiring to drift in about thirty feet lower than his former experiments, he dug a perpendicular shaft about eight feet diameter. The surface of the ground where he commenced was timbered with aged trees. *Six feet from the surface he came on to a stone-paved hearth*, several feet in extent. The lime stone of which it was made showed unmistakable evidence of the action of fire, besides the presence of ashes and charcoal. Many fragments of pottery were found, also the bones of some large animal on and near the hearth (I think the knee joint of a buffalo or animal equally large.) He afterward sunk his shaft several feet below the hearth, yet a part of hearth, ashes and charcoal were plainly visible on the sides of the shaft. The soil below was like that above the hearth, a mixture of vegetable mold and leaves or bluff formation. The specimens of pottery are identicle with those found in the mounds, and which I have before described. They were made of the same material and embellished with marks, or beaded, or notched like those taken from the mounds, and I draw the following conclusions: The same race of men that constructed those mounds had a camping place where the hearth, bones, and fragments of pottery were found. For a soil of vegetable mold and the natural wash from the hills to form to the depth of six feet must have taken from eight hundred to one thousand years unless causes more active and violent than have existed the last hundred years were in force, as the locality was much above any high water of the Missouri River. At least it affords a data to estimate with tolerable accuracy their antiquity.

CORNING, Mo.

HORACE MARTIN.



## BURIAL HEAPS IN THE VALLEY OF THE ST. LAWRENCE.

*To the Editor of the American Antiquarian :*

Having just returned from an excavating tour, about ninety miles north of Toronto, I am induced to write a short article to your paper on my researches.

The Ossuary which I went most particularly to work in, is situated near Mr. Benner's farm, in North Orillia township, about four miles from Lake Couchiching. It was first discovered by two farmers, who lost some cows, and searching for them, came across a round hole in the ground, which they thought looked very strange, and decided to have a dig, when they got five copper kettles, besides numerous beads, tomahawks, pipes, &c. This was about eight years ago. Since then, there have been doctors from different parts of the States and Canada, to get skulls and bones of all descriptions, some of which are very useful to them on account of the different wounds, but it was never properly worked over.

There are two theories as to their origin; the first is, after battle, it was customary with the Indians to gather all their dead together and bury them in one large hole, with all their war instruments and personal ornaments which they might have around them; and the second is, that when any of them died, they would erect a high platform, put the body on it, mark the spot, and every eight or ten years collect all the bodies, scrape the flesh from the recent dead, and bury them in one large hole. This was termed, the feast of the dead, and lasted for several days, with solemn religious rites. One of these feasts is mentioned in history, as having been witnessed in Nottawasaga Bay, about the middle of the sixteenth century, by French missionaries.

I think there is but little doubt that both these theories are correct. The bodies were generally buried in a sitting position, facing the East, though this was not always the case, but in most of the graves and ossuaries which I have opened they were in that position; and I might here mention, these pits are easily found on account of the bodies decaying away, leaving a cavity in the ground. Unlike the Mound Builders of the Ohio or Mississippi, they did not pile the earth on top so as to leave a mound to mark the spot, but merely smoothed it over; consequently, as I said before, as the bodies decay away the earth settles down and leaves the hollow in the ground, and as they are perfectly round they are easily known when you come across them. The ossuary which I have just inspected I should think was from 200 to 250 years old. There was a pine tree growing over it about three feet in diameter, and about two feet of decayed vegetable matter; there were about 300 bodies in it. The lowest depth at which I found anything was ten feet, where I came across

two copper kettles, but, on account of their great age, were all broken to pieces when I got them out. There were several separate graves around it, where, I should think, the chiefs had been buried, but I never found anything of consequence to substantiate this. In one which I opened there was a lot of human bones which looked as if cremation had been attempted; it may have been bones of the enemy, but so far, I think, there has never been any proof that this was the custom. I myself do not think so, although it is difficult to account for the manner in which a lot of human bones could be buried at the depth of four feet, which were unmistakably burned at one time.

TORONTO, ONT.

#### BURIAL MOUNDS IN INDIANA.

*To the Editor of the American Antiquarian:*

In my early recollection of this, my native county, there were as many as twenty elevations. Mounds ten to twenty feet high, twenty to sixty feet in diameter at the base, were located on the highest points of land. They were from 300 to 450 feet above the level of the Ohio river. The one farthest from the river was about five miles. This of late has been converted into a family burial place, which is the largest of any within my knowledge. It is in perfect condition, except three graves on the top, and is covered with a growth of small trees. It is sixty feet in diameter at the base and well proportioned.

In excavating for the graves about one year ago, we used the spade without other implements. After penetrating the sod, we found loose loam, which was very fine and without clods. I know of one mound the *base of which was laid with flat lime stone*. It was never explored beneath the stone, but these were from appearances originally laid on the earth's surface. It was not explored on account of the superstitious notions of the owner, and has been lately plowed down. Eight miles from this city, on the Kentucky side of the Ohio river, there is a spot of ground which, from all appearances, must have been used at one time as a place of burial. At present the *vaults* are quite perceptible in the face of the bluff, as they give way to the wash of the river. All of them furnish relics, pottery, flints, arrow points and bone implements. Some vessels are perfect, and all exhibit charcoal and bones of the dead. The vaults have more or less of common blue lime stone in them. All of them have been subjected to great heat. There are also many parts of horns of elk and deer, as well as large perfect teeth and tusks of bears and wolves, and of other animals now extinct. Many of the relics of pottery have figures or hieroglyphics on them.

MADISON, IND.

M. A. GAVITT.

## BURIAL MOUNDS IN MICHIGAN.

To the Editor of the *American Antiquarian*:

Near this place the skeleton of a man was found which was encased in a certain kind of clay, unlike any clay ever found in this country, which clay had been burned after it was adjusted to the subject, some of the charcoal still remaining. The person was supposed to have been more than six feet in height, having very large bones, a very broad under-jaw, the front of the head receded so much as to leave no forehead. *A burned clay vase, or urn, of about three feet in height was found standing upright, into which the whole skeleton of a man had been compressed,* the top of the urn being covered with burned clay. Resting against the outside of the urn, was a smaller skeleton, supposed to be that of a female. Pipes were found with the skeletons which had been molded from some plastic material and glazed and burned, on which were skillfully portrayed the likeness of different human faces, and other fancied or real objects. Although each pipe has several faces exactly alike, yet they are entirely unlike those on the other pipes. The whole group of faces represents the broad, round, oval, oblong, and conical shaped faces, not caricatures, but careful, skillful, and truthful representations of nature. Stone tubes, and stones which had been wrought into many curious and beautiful forms, many being perforated, all requiring great skill and patience, were found in the mounds with the above described skeletons. How long those bones had reposed in their air tight burned clay inclosures, in the bowels of these mounds, or to what particular race of human beings they belonged, are questions which are too profound and grave to induce an opinion from me. But my long acquaintance with the language, manners, and customs of the Indian tribes of Michigan, enables me to say that they never disposed of their dead as indicated above. Nor did they make such highly ornamented pottery as there found. Nor did they possess the *skill* to make such marvellous things, especially the ornamented pipes. Moreover, if it were possible, it is probable that they would have represented the human faces and other objects as seen by them rather than with the features which these relics contain. And furthermore, I believe, Indians were never arrayed in such a snug, neat-fitting single garment, reaching from the neck to the feet, and showing such a natural, and graceful formed bust, as was displayed by the female figure on one of these pipes. It is very obvious to me that the wild, savage Indians, never invented nor manufactured these implements, but adopted and used them whenever they found them. At this place we have stone axes, hatches, mauls, pounders, wedges, scrapers, pestles, rollers, balls, peelers, gonges, tubes, and hundreds of flint arrow heads, of all lengths from five-eighths

of an inch to four inches long; all of the above are *stone*; also one copper and one iron arrow-head. Soon after the French arrived in Michigan, more than two hundred years ago, the Indians were supplied with hatchets, hoes, knives, and guns, and other iron implements, which superseded the use of stone implements to a considerable extent. The young men and boys, however, continued the use of the flint arrow-heads and did to a late day, because they were unable to purchase guns.

KALAMAZOO, MICH.

HENRY LITTLE.

#### CLIFF BURIALS IN TENNESSEE.

*To the Editor of the American Antiquarian:*

During an exploring expedition through the Southern States, Mr. Jas. Terry discovered a unique mode of aboriginal burial. On a bluff, some two hundred and fifty or three hundred feet in height, near Duck River, in Hickman County, Tenn., is situated an interesting group of mounds and fortifications covering an area, probably, of fifteen acres. On projecting shelves in the face of the cliffs, he found a number of graves which yielded skeletons and specimens of pottery. Wherever a ledge occurred in the soft rock formation sufficiently wide for the interment of a human body, cliff burial was practiced, and the graves presented every indication of great age. Such sites were probably chosen to guard against desecration by wild animals or enemies.

E. A. B.

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#### RECENT DISCOVERIES.\*

##### INSCRIBED TABLET FOUND AT STERLING, ILL.

*To the Editor of the American Antiquarian:*

Dr. J. T. Everett, of Sterling, Ill., has obligingly furnished a description of a very interesting "find" that was recently made by men engaged in grading the race track at that place.

In a mound of slight elevation five skeletons were found, about three feet below the surface, the skulls being in the centre, near each other, the other portions radiating regularly therefrom. The skeletons were covered with about six inches of soil. On this were fragments several inches in thickness of limestone, covering an elliptical area of about 30 to 40 square feet. The charred appearance of these stones, especially the

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\*NOTE BY THE EDITOR.—In giving the items under this head the Editor does not hold himself responsible for the facts, nor does he guarantee the genuineness of the "finds." The gentlemen sign their own names to the communications, and if they are deceived the responsibility is theirs, not ours. We are glad to mention these discoveries, whether they bear on the face of them marks of genuineness or not.

upper surface, and the abundance of charred bones found thereon, would seem to indicate that cremation was practiced at this place—and perhaps burnt offerings were made. Over this deposit of stones and charred bones were about twenty inches of common soil.

One of the skulls was of so low a type as to suggest that it might belong to the "missing link." It was very thick, and the distance from the arch of the superior maxillary bone to the top of the cranium was only one and one-half inches. Another skull, indicating a higher order of intelligence, had a stone arrow point inside of it, and in the right temporal bone was an orifice through which it had evidently been projected. Dr. Everett found three other stone arrow points at that locality, each of which was about two inches long, and all nearly of the same shape. They were all "war points"—that is, they were made so that they would become detached from the shaft if an attempt were made to pull the arrow out from the wound.

But the most interesting discovery was that of a large stone, nearly cubical in form, 41 by 42 inches square, and 34 inches thick. It is of Galena limestone; quite friable, and a variety not found within ten miles of that place. On turning the stone over it was found that there were upon the under side engravings of what were probably intended to represent the Sun and Moon, or perhaps only the Sun, the lines being cut in to the depth of half an inch or more. Near the centre is a large circular figure, covering about one-third of the surface of the stone. Within this circle, probably to represent eyes, are two small circles, and in the place of the mouth is a diamond, the longer diameter running up and down. Immediately over this large circle, or face of the sun, is a small one, which may represent the moon, but more likely that circle and the two on either side of it have a significance, if any, similar to the three circles over the sun on the "Rockford Tablet," or those over the face of the sun in the Mexican calendar-stone. At the lower right-hand corner, on a line with what would represent the chin of the sun's face, is another figure, rudely representing the ear-drop or jewel so conspicuous in the figure of the sun on the calendar-stone. At the lower left-hand corner there is not any engraving now visible. It may have crumbled off during the long years the stone has laid there, for the rock is quite friable, and was but a few feet below the surface.

Dr. Everett has had plaster casts made of the face of this interesting relic, which will be preserved by the Sterling Scientific Association, of which he is the president.

Very Respectfully,

CHICAGO, ILL., Aug. 20, 1879.

ALBERT D. HAGER.

## THE ELEPHANT PIPE.

This most interesting archæological relic, now in the Museum of the Davenport Academy of Natural Sciences, is due to the energy and generosity of that indefatigable and learned explorer, the Rev. J. Gass.

The history of the finding of this relic, and of the manner of its coming into the possession of the Academy is as follows, taken from a paper read before the Academy by the Curator, Mr. W. H. Pratt:

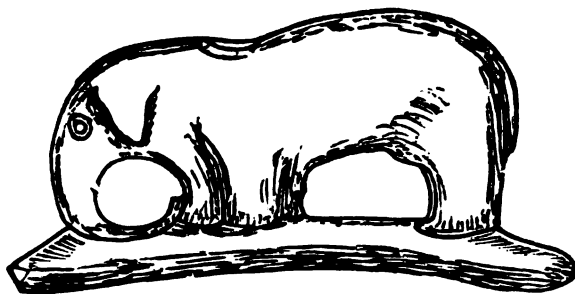
By a letter from Mr. Peter Mare (the original finder), now living in Kansas, we learn that he found this elephant pipe six or seven years ago (1872 or 1873), while planting corn on his farm, where he resided, in Louisa County, Iowa. (The man from whom we obtained it—the brother-in-law of Mare—was under the impression that it was found in Muscatine County, and it was so stated in the first published account.)

Mr. Mare kept the pipe until he moved to Kansas in 1878, and then gave it to his brother-in-law, from whom we obtained it. The Rev. Mr. Gass, having indirectly heard last winter of the existence of such a relic, sought out the owner and endeavored to purchase it, but in vain; he however succeeded in borrowing it for the purpose of taking casts and photographs.

While being copied in plaster it was accidentally broken, and then by compromising the matter with the owner, and paying him about five dollars, we obtained the ownership. The finder, Mr. Mare, an illiterate German farmer, had no appreciation of any scientific value or special interest attaching to his pipe. He wanted and got nothing for it, regarding it merely as a curiosity. He found various other "*Indian stones*," as he called them, but all these were lost in moving about.

The ancient mounds are very abundant in that region (Louisa County), and also very rich in relics, and it is a significant fact that, in exploring a considerable number of them, we found that in their construction *no excavation had been made*, but that the bodies and relics had been deposited on the original surface of the ground, and the mound raised by bringing the earth, apparently, from the immediate vicinity. In such a case it would not be strange if in a mound gradually removed by long cultivation, the relics so deposited should at last be reached and turned up by the plow.

The material of the pipe is a soft, fragile sandstone. This was not detected until the fracture showed its true nature, a dark, external polish, apparently the result of use, misleading us at first. The weight of the pipe is 164 grammes. The accompanying



wood cut ( $\frac{1}{2}$  size) gives a tolerably good representation of the figure of the animal, but, unfortunately the engraver has failed to reproduce the pointed, project-

ing lower lip, an elephantine feature well marked in the original.

The dimensions of the figure are as follows, viz.: Extreme length (from frontal protuberance to root of tail) 88 millimetres; height (at shoulders), 39 ms.; girth, 85 ms.; thickness (at shoulders), 24 ms.; circumference of trunk (at the extremity of the lower lip), 33 ms.; length of trunk (from the tip to the angle of the mouth), 35 ms.; length of tail, 29 ms. The animal is represented as standing with the feet together, and with the trunk coiled and resting on the ground, the tip reaching up to the fore-knee (properly the wrist); this position of the trunk and its comparative length shows that the artist was aware of the greater proportionate height of the animal, but was cramped in the execution of his sculpture by the typical and conventional form of the Mound Builder's pipe, or by some unfitness of the material, or perhaps by both of these causes.

However, assuming the height to have been designedly reduced for artistic purpose, and taking the length (88 ms.) to be 100 feet, we have the following proportions, viz.: Girth, 9 feet 8 inches; thickness at shoulders, 2 feet 9 inches; circumference of trunk, 3 feet 9 inches; length of trunk, 4 feet; length of tail, 3 feet 4 inches.

The following table of proportionate lengths and heights of elephants and mastodons is submitted, though it may prove more curious than useful:

Animal.	Where.	Length	Height.	Authority.	Remarks.
Elephant.	Living, India.....	100	63	Cyclo. N. Hist.	
Mastodon.	Skeleton, Albany.....	100	83	Cyclo. N. Hist.	Found Cohoes, N. Y.
Mastodon.	Skeleton, Brit. Museum.	100	47	Cyclo. N. Hist.	Kock's, killed by man
Pipe.....	Davenport.....	100	44		found Pomme de Terre Riv. Mo.

However disproportioned the figure may be, there can be no doubt of its representing some one of the elephant family, and as, in this country, the mastodon was the last to survive, and in all probability only disappeared a few centuries ago, we may safely infer that it was the animal represented.

From 1794, when Jefferson published the Indian tradition concerning the recent existence of the "père aux bœufs" to the

discovery of this pipe, in 1879, there has been a steady and gradual, if slow, accumulation of evidence to prove this contemporaneous existence of man and the mastodon.

The artist who made this pipe must have been familiar with the elephant form, either from having seen the living animal or a delineation by a preceding artist, or from oral tradition in his tribe; the alternative idea or other horn of the dilemma being that he "*evolved it out of his inner consciousness*," in other words, that it was a product of his imagination.

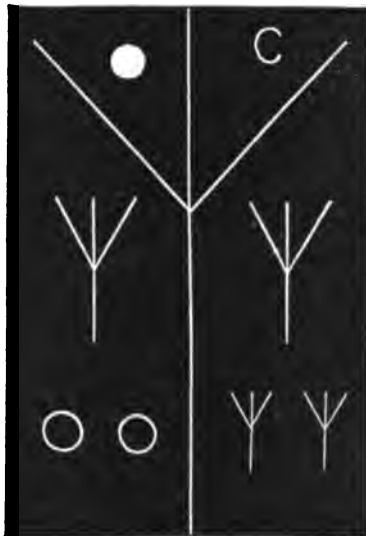
One feature of the delineation remains unaccountable, the omission of the tusks, which were so large and formidable in the mastodon: yet they are omitted here, as also in the elephant mound in Wisconsin. In *Materiaux* Tom. IV., p. 197, is depicted the head of a mammoth in bronze, found in Siberia, which is also represented without tusks.

DAVENPORT, IOWA.

R. J. FARQUHARSON.

#### INSCRIBED TABLET FOUND IN IOWA.

I find on my premises traces of former civilization, in pottery and other relics which are not used by the present Indians. In 1873 I broke a piece of land on the S. E.  $\frac{1}{4}$  Sec. 27, T. 12, R. 11 E. S. M. In so doing I opened a place where there was once, no doubt, a Pottery. There was a circle 40 feet in diameter in which I found hard burned clay and fragments of pottery in considerable quantity. This pottery and clay was both of a white and a dark color. Forty rods north of this place is an extensive bank of white kaolin, the clay from which is used for modern pottery in Louisville. In 1874 I broke another piece of land



on the southwest quarter of the same section, which is one of the highest points of land, situated a mile from the Platte River. The plow struck a sandstone one foot long, a cut of which I send you. It is one foot long, eight inches broad, and six inches thick. It was in the ground ten inches below the surface. The stone is hollowed out about an inch from all sides, and has the impression found in the cut. I also plowed out pottery on the creek near this, and among the fragments one whole vessel with handles, black in color, but not glazed, and showing traces of



sand as mixed with the clay. I found one broken stone axe, of green granite. No granite is found in this State. Stone here is sand or lime. It is evident that one part of this country was inhabited before the present race of Indians.

LOUISVILLE, Neb.

J. T. A. HOOVER.

INSCRIBED TABLETS FOUND AT PIQUA, O.

According to the request of your letter I send you an account of the discovery of two prehistoric tablets. They were found in a gravel pit, the larger on the 6th and the smaller on the 7th of last June. The pit is situated one-half mile west of Piqua, Miami County, Ohio, and about 150 yards south of the Pan-Handle Railroad, in a hillside which, ages ago, formed the banks of a small stream. In its ancient bed there is, at present, a small creek, which flows into the Piqua Hydraulic, and known as the Rocky Branch. These tablets were found 15 feet from the top and 50 feet into the hillside. There are no indications of mounds or ancient works within a mile of the spot. The courses lay regularly above the gravel, and have not been disturbed since their deposit. The larger was found by R. J. Templeton, while working in the pit. The owner of the pit, observing it, and supposing it to be a piece of board, told the man to dig it out. After washing it he noticed the inscription. The next day the smaller tablet was found by J. Deffress, while shoveling gravel. When I heard of what had been found I examined the pit and obtained the relics, which I presented to the Smithsonian Institute, after taking copies of them.\*

PIQUA, O., Sept. 2, 1879.

C. T. WILTHEISS.

REPORTS AND PROCEEDINGS OF SOCIETIES.

*The Proceedings of the Davenport Academy of Natural Sciences.*—Vol. I., 1867–1876. An Ancient Copper Implement, donated by E. B. Baldwin—A. S. Tiffany. Prehistoric Cremation, by A. S. Tiffany.

Report of the explorations of the Ancient Mounds at Albany, Ill., by W. H. Pratt.

Report of the results ditto, by A. S. Tiffany.

Report of Explorations of the Ancient Mounds at Toolesboro, Iowa—W. H. Pratt.

\*NOTE BY THE EDITOR.—These tablets have characteristics very much resembling the Grave Creek stone. They are about three inches long, two inches wide, one-half inch thick; have a rule or line running parallel with the edge, making a margin one-half inch wide, and the characters inscribed within the lines. The characters consist of a bow and arrow rudely inscribed in the corner of each. Above the bow are letters resembling very much those on the pebbles which were found in the post-hole, near Philadelphia, and described in Vol. I, No. 3. Melted lead was found run into one of the tablets.

Mound Exploration in 1875, by Clarence Lindley.

Mound Explorations in 1875, by A. S. Tiffany.

A Study of Skulls and Long Bones from Mounds near Albany, Ill., by R. J. Farquharson, M. D.

Hieroglyphics observed in Summit Cañon, Utah—J. D. Putnam.

Indian Names for Insects, by J. D. Putnam.

Vol. II., Part I., Ditto. Exploration of a Mound near Utah Lake, Utah, by Julia J. Wirt. Manufacture of Pottery by Majori Indian Women, by Dr. E. Palmer. Shell Money, and other Primitive Currencies—W. H. Pratt. Mound Explorations in Jackson County, Iowa, by C. T. Lindley, illus. Discovery of Inscribed Tablets, by Rev. J. Gass, illus. On the Inscribed Tablets found by Rev. J. Gass, by R. J. Farquharson, M. D. Recent find of Skulls and Skeletons in Ohio, by Rev. S. D. Peet. Exploration of Mound No. 10, Cook's farm, by Rev. J. Gass. Description of Inscribed Stones found in Cleona township, Iowa, by Rev. J. Gass. Exploration of Mounds on the farm of Col. Wm. Allen, by W. H. Pratt.

*Transactions of the Literary and Historical Society of Quebec.*—Sessions of 1877-78-79. The Aborigines of Canada under the British Crown—Glance at their Customs, Characteristics and History, by Wm. Clint.

*Bulletin of the Essex Institute.*—Vol. 10, No. 456. Archaeological Explorations in Tennessee, by F. W. Putnam. pp. 72-85. Indian Character. Prof. Geo. Dixon. pp. 137-40.

*Report of Proceedings of the Academy of Natural Sciences, of Philadelphia.*—January, 1878. Part I. Cerebral Convolutions of the Negro Brain, by Dr. A. J. Parker. Part II. Prehistoric Remains. Part III. Simian Character in Negro Brains, by Dr. A. J. Parker ( $\frac{1}{2}$  p.)

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#### EDITORIAL NOTES.

We are happy to give to our readers in this number a view of Fort Snelling. The picture is a familiar one, but it is one of those scenes which are always old and always new. Its beauty is enhanced by historical associations. The fort has always occupied the border line between the historic and the prehistoric races. Even at the time when the spot was first visited by Hennepin, its beauty must have been striking, but its surroundings are the same now, unmarred and unchanged by the hands of time. While other historical points, even in the vicinity, which retain the names given them by the discoverers, such as the Falls of St. Anthony, St. Augustine, in Florida, and even Santa Fé, in New Mexico, have changed, this locality bears the same marked traits given to it by the hand of Nature. Other forts have had many historical associations about them, but many of them, such as Fort Pitt, or Duquesne, Fort Presque Isle, Fort Frontinac, and Fort Creve de Cœur, have disappeared. This, to be sure, was one of the latest built, erected as late as 1827, yet no fort now existing has been known to more of the native tribes. It has, in fact, always occupied the border line between the historic and the prehistoric races. It was the scene of the last conflict between these two races which will probably ever be witnessed as far east as the Mississippi River, a conflict which occurred in the midst of the great national struggle, August, 1862, and is a witness of the removal of the great Dakota tribe from their original seat on the upper Mississippi. These frontier forts should be preserved, or the views of them in some way perpetuated.

The mention of Fort Snelling suggests the name of Rev. T. S. Williamson, Protestant Missionary among the Dakotas, also a translator of the Bible in the Dakota language. His decease and a sketch of his life and character has been published by Rev. Dr. Riggs, his coadjutor, but his name is worthy of mention here. The Protestant Missionaries among the native tribes have not been celebrated in history. Their names are not recorded in geography, but it is probable that in the work of per-

petuating the Indian languages, if not in making known the customs and traditions of the Indians, they have done as much for science as any other class of men. It is to be regretted, however, that *none* of the missionaries, either Papal or Protestant, have done what they had great opportunities to do, namely, to perpetuate the traditions, to study philosophically the tribal organizations and racial peculiarities, or to analyze and compare the different languages of these rapidly changing races. It is one object of the ANTIQUARIAN to so awaken the spirit of scientific research among missionaries that the many neglected opportunities may be embraced before they are lost forever.

*Proceedings of the American Antiquarian Society*, at the semi-annual meeting held in Boston, April 24, 1878, Worcester.

This report contains two articles on Archæology, one by Stephen Salisbury, of Mass., and the other by Dr. Valentini, of New York City. The first is a description of some terra-cotta figures, Isla Maijores, near the north east coast of Yucatan. It contains letters and extracts of letters from Augustus Le Plongeon, M. D., and is accompanied by three full pages of cuts or heliotypes. There is a picture of an ancient incense burner, a large earthen vase, which was discovered in the interior of a small shrine or temple. The front of this vase is a face, very expressive, with open mouth, showing the upper row of teeth filed, the nostrils of which are perforated, and also the pupils of the eyes. The author does not state whether the perforations of the nostrils and eyes were designed to show the light of the fire burning in the vessel, but if this were so, we could imagine the sight that the expression given by the face would be very striking. Le Plongeon regards the figure not as an idol, but as the portrait of some high priestess. "Whatever it was, the degree of skill manifested in the execution would indicate a trained eye and hand, and a knowledge of effect not often observed in the stone and clay works of Indian artists." The head is surmounted by a helmet, 8 inches high, and presents a front 7 inches and  $4\frac{1}{2}$  inches wide. The same author says: "One thing is clear to my mind, that the Ceramic art kept pace with that of sculpture, and at a certain period Mayapan boasted of very skillful artists, who could transform the clay into beautiful objects of art. In point of artistic finish, we should give the first place to those of the Maya country as is generally conceded to its architecture and sculpture."

The paper by Dr. Valentini is a very remarkable exposition of the so-called solstisial stone of Mexico, which is accompanied by a folded heliotype. The author professes to have found a true interpretation in regard to the stone as a calendar, indicative of the chronological system of the Mexicans, and the same

time expressive of a particular date or event. His endeavor is to prove that the whole sum of multifarious symbols will turn out to be a text, representing all the symbols which the ancient Mexicans used for their peculiar division of time. The date is that of an event which transpired not many years before the Conquest of the Spaniards, viz: 1749. Dr. Valentini says, in a general way, that "the Mexican hieroglyphics are not to be read in the same manner as those of Egypt or Assyria, by sound. The Mexicans possessed a language very highly developed; they had expressions for each idea, abstract and concrete, and could convey them with wonderfully subtle shades, full of feeling and rich in thought; but to separate the voice into vowel and consonant sounds, and to depict each one by an arbitrary mark, symbol or letter, and then to form of those letters the word, and to place each syllable one after the other as we do in writing, was to them an unknown art." The Mexicans, as we have said, used no phonetic system, but had an expressive picture writing.

*The Centennial Celebration at Santa Fé, New Mexico.* Santa Fé, New Mexico, is the oldest city in North America. The name of the city, Santa Fé (holy faith) shows by whom it was first visited, the Spaniards. The country was first spoken of by the historian Castañeda, in 1540, but in 1542 Francisco Vasquez Coronado, a Spanish commander, visited various pueblos and mentioned them by their Indian names. The opinion is, that Santa Fé occupies the place of one of those ancient Indian towns called Cicuyé. There is extant, a decree given by Charles V, Emperor of Spain, 1551, declaring that the Indians should be brought into settlements; and Philip II published a statute on the founding of villages. Thus it was at least ten years before the settlement of St. Augustine that this frontier city of the far West was settled by the Spanish, and received at that early day the notice of the Emperors of Spain. There is now standing in the city a building, the Governor's palace, which was erected in 1581, forty years before the landing of the Pilgrim Fathers. The pamphlet before us contains the centennial speech of the mayor of the city, and a valuable historical sketch by D. J. Miller, containing many interesting facts.

The Daily *Alta-Cal.*, for Aug. 3d, mentions the arrival of Rudolph Falb, a German professor, who had been studying the Aymara tongue in Bolivia. This language he maintains is older than the Quichua. He says that it bears an unmistakable affinity to the Semitic, in which the radical form of every verb has three consonants.

General di Cesnola is about to confer a great kindness on the archæological students of Europe and America, and especially

on those whom time and distance prevent from making a direct study of his invaluable collection of Cypriote relics now safely housed in the new Metropolitan Museum. He has made arrangements for the publication of a three-volume work, the pages of which will be twelve by seventeen inches in size, and which will contain over 450 plates, exact reproductions of the most valuable articles in the collection, and an equal number of pages of letter-press. Houghton, Osgood & Co., who will publish the work, expect to expend \$60,000 on an edition of 500 copies. The volumes will be \$50 each, or \$150 for the entire work.

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### LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHET, WASHINGTON, D. C.

The relations existing between the dialect of the *Caraïb* or Galibi women and that of the *Caraïb* men have been lately investigated by Mr. LUCIEN ADAM. In former centuries this peculiarity was observed not only on the smaller islands of the Antilles, but also on St. Domingo; it originated in conquests made by the pill-bustering *Caraïbs* of the mainland of South America, who had invaded these islands, massacred the men and lived with the women. Father Labat informs us that the women knew the language of the men, and the men that of the women, but that the former would feel dishonored if they were heard to speak the female dialect, and that the women conversed with the men in the male dialect only. The article of Mr. Adam appeared in the "*Mémoires de l'Académie de Stanislas*," 1878, under the title: *Du parler des hommes et du parler des femmes dans la langue Caraïbe*, 8vo, 32 pages.\* The author arrives at the result that both so-called "languages," which are transmitted to us in copious French vocabularies from the 18th century, were dialects of one and the same *Caraïb* stock; that such personal pronouns as occur in the female dialect only, are Arowak, and two of the male pronouns are Galibi; that of 160 *Caraïb* words which could be identified with Galibi words of the South American continent, 110 occurred in the dialect of the men, 9 in that of the women, and 36 were common to both sexes; that of 79 *Caraïb* terms which could be identified with Arowak terms, 60 were used in the female dialect, 5 in the male dialect, while 11 were common to both.

NATCHEZ is not the correct pronunciation of the name of that celebrated Southern tribe, of Maskoki affinity. The remnants of it, which live in the "Cherokee Nation," Indian Territory, call themselves Naktche, or Naktsee, and in the heading of the

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\*Published separately by Maisonneuve & Co., 26 Quai Voltaire, Paris, 1879.

original manuscript of Gallatin's vocabulary, in Philadelphia, are found the two names: Isalakti, a Nahktse chief (his informant), and Speonatiktse, a term which probably refers also to the national name. The terminal *z* is the old-fashioned mark of the French plural, standing for *s*, and the tribal name should be written either *Náktche*, or, as Dr. Brinton has it, *Nache*. The French settlers in Louisiana obtained the name from the Chetinacha Indians, in whose language *nakse* meant *brave*, *nakse hase*, *brave man*, viz., *a fighter, warrior*. Hence we are not acquainted with the name which the Náktche gave to themselves; but this was probably no other than *Indian*: *tapaköp*, or *man, male*: *kapína*, both containing the same radix, *kap*. When the French became acquainted with the Náktche, a portion of the Sháwano tribe were subject to them. These people went by the name of Michimichiquipy, which term is rendered by "Puants," or "Stinkards." In the Sháwano dialect *to stink* is: *matsineaguatui*; *the people are stinking*: *matsimeaguathigi lenawégi*. The first part of this term *mátsi*: "*unjust, mean, of low character*," is an adjective, the plural form of which is *métsi*; and this plural, in its reduplicated form, is the origin of Michimichiquipy.

THE YUCHI language forms a linguistic family for itself, being radically distinct from the neighboring idioms of the Masköki, Timucua and Cherokee. It was formerly spoken on upper Chatahúchi River, the Yuchi settlements extending from there eastwards or south-eastwards to Flint River. This people trace their origin from the sun, and possess several myths tending to show a very ancient sun-worship. Not much is known as yet concerning their language, although it could be easily obtained from the three hundred Yuchis living in the Indian Territory. It possesses, however, a profusion of nasal, guttural and laryngeal sounds, the English *th*, the lingual *s* (or *thl*), and the *f*. The Creek Indians say that to them it is of difficult pronunciation, and so it will be probably to us. Major J. W. Powell has lately collected a few grammatic elements of it. Yuchi seems to indulge in metaphors in many of the more abstract terms, thus *God* is to them "the man up above;" *ghost*, *pa-itlitchiona*, "hunting man;" *devil*, *ko-iyupthlona*, "swinging-man;" *thunder*, *piongptsetong*, "rolling man above." Some natural objects are called in the following manner: *moon*, *shäfa*, "shine-bright;" *sea*, *ptsa-otchka*, "white water" (same in *Creek*); *fox*, *tcha-tchliona*, "the running one;" *squirrel*, *tchayätch*, "the climbing one;" *bird*, *psenna*, "the flying one." In its series of numerals, Yuchi differs from Masköki and Timucua by not following the quinary system of numeration. Some ascribe to this idiom *clucks* of the same kind as observed in the idioms of the Bushmen and Hottentots.



THE Indian name of NOTTOWAY is familiar to us as a tribal name, but few know of the extended use which the various Algonkin tribes made of it. It historically occurs as the name of a Virginian tribe, which all authorities agree now to have been of Iroquois parentage, and to have belonged to the southern portion of the extended Wēndat-Iroquois race of Indians. Nodowaisi was also the Odjibwē name of the Dakota race, and the Sioux are called to this day by the Potawat'mis Nátuessuag, in the singular form, Nátuesse, while the Odjibwē call them Pu-ánag, in the singular: Puán. To the Potawat'mis the Weyandots or Wēndat are Nótueg, sing. Nótue, of which Nátuesse is the diminutive form. The Nottaway River, passing through the southern part of the state of Michigan, east of Cassopolis, is to the Potawat'mis: Nótue sibi. To the Sháwano or Sháwni tribe a Seneca Indian is Nátue, the Seneca tribe, Nátuegi; one Weyandot man, Natuésa, the Weyandot tribe, Natuésemi. These names have been often explained by "*enemy*," "*hostile Indian*," and in the main this explanation is correct. But these hostile nations are not simply called enemies by this epithet; they are stigmatized as "*sneaks*," "*creeping up stealthily for the attack*." In the Putēwat'mi dialect nótue, plural nótueg, is *snake*, and its diminutive, nátuesse, plural: nátuessuag, is a *small snake*, or, applied to fighters, a *sneak*. In other Algonkin dialects other terms are now in use for *snake*, *serpent*, f. i., manetü in Sháwano. A hostile nation living in close vicinity is termed *sneaks*, one living at a greater distance *small sneaks*, because appearing in smaller numbers; this is the reason given by the Potawat'mi Indians for the use of the diminutive form.

THE linguistic family of the GUAIKURU, in Mato Grosso and on both sides of Middle Paraguay River, is geographically well defined, though there are still some doubts as to its southern limit. The Guaikuru call themselves Oaekakolot, and their present name is said to be a corruption of the Tupi word oatacuruti-uara, "*fast runners*." The Guaikuru living east of Paraguay River are called Enacagas or Eyiquayegis, while the white settlers call them Lengoás, on account of their large lip-plug or tembetá. The dialects making up this linguistic family are: 1, the Guaikuru; 2, the Abiponian; 3, the Mocobi, Mbocobi, or Amókebit; 4, the Toba, or Natákebit; 5, the Yapitalakas, or Zapitalakas; 6, the Guachi, on Mondego River.

PROF. NORDENSKJOLD, on his exploring trip along the northern coast of Asia, anchored at a point on the mainland inhabited by the *Tchuktchi*. These people resemble the Eskimo in their exterior; their complexion is brownish yellow, hair and eyes jet black. Lieut. Nordqvist succeeded in obtaining about 300 words of their language, and this stock of words greatly facilitated the intercourse between the explorers and the tribe.

THE Yuma tribe of the *Kónino*, or, as they call themselves, Avēsùpai, live in Cataract Creek, a southern affluent of Colorado river, running through a deep gorge in Northwestern Arizona. They were lately visited by Mr. G. K. Gilbert, geologist of Major J. W. Powell's survey; but the first to discover their Yuma affinity was Mr. Alphonse Pinart, who obtained a long series of terms of their language, which shows conclusively that their idiom is of the Yuma family.

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*Ollantaï*, drama en vers quechuas du temps des Incas. Texte et traduction par G. P. Zagarra. Paris: Maisonneuve. Pages 186 and 271. 8vo. (The author uses a phonetic alphabet of his own.)

*Bessels*, Emil; Die Amerikandsche Nordpolarexpedition. Leipzig, 1879. 8°. This volume describes, in a popularly-attractive style the perilous voyage of Capt. Hall's expedition through Smith's Sound, 1871-1873. Although the publisher, Engelmann, had printed a strong edition, the demand was in excess of the stock in hand by 1700 copies, a short time after its publication.

*A New Map of Yucatan*, on which all the ruined cities are marked, has appeared in three different editions, under the title of *Mapa de la Peninsula de Yucatan*, por T. Hübbe y Andres Aznar Perez, aumentado por C. Hermann Berendt. 1878. Magnitude 1 to 800,000. For sale at Mr. Shiel's, 896 Broadway, New York.

*Dr. Gustav Brühl*, Aztlán-Chicomoztoc, Eine ethnologische studie. N.-York, Cincinn., &c., Benziger Bros., 1879. 8°. 16 pages.

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#### ETHNOLOGIC NOTES.

**PROVERBS.**—In the unwritten literatures of our North American Indians we often meet with most poetic ideas, and with mythic productions which in originality, beauty and freshness rival many celebrated myths of the old world. But we hardly find any gnomonic poetry, riddles and *proverbs*, nor can even *proverbial locutions* be called frequent. To produce these, two men-

tal qualities are necessary—the power of abstraction, and the tendency to use metaphors and symbolic expressions in speaking. We know that the Eastern Indians possess the latter to a certain degree, but neither the Western nor the Eastern hunting Indians of the United States are possessed of large power of abstraction, comparable to that of the agricultural populations of the Eastern hemisphere. An Austrian investigator, *Charles Mayreder*, member of the German Association for Oriental Research, is composing a “Bibliography of Proverbs of All Nations,” and requests every scientist in any part of North or South America, to send him information on *Indian Proverbial Lore* to his address in *Vienna IV., (Austria), Schleifmühlgasse, 6.*

EDWARD PECHUEL-LOESCHE, well known by his travels through Western Africa, and his writings on ethnology, is now collecting for publication outline sketches of *hands and feet* from all the divers populations of the world, and requests all the students of ethnology coming in contact with rude, or half-civilized tribes to send him sketches of this kind to his address, *Reichsstrasse 48, Leipzig (Germany).* The mode of obtaining them with accuracy is as follows: Place the foot lightly upon a sheet of foolscap paper, follow its outlines with a lead-pencil *held vertically*, and draw on the side of it the hand in the same manner. The middle finger *must lie* in the axis of the lower arm. The right hand has to be drawn on side of right foot, the left hand on side of left foot. *Add length of body, sex, age, nationality or race, color of hair and eyes;* add to this the statement whether the individual is fat, lean, or of normal exterior.

MR. DE VILLIERS, the new Governor-General of French Cochinchina, was Director of the Interior in the *Algerian* colony under General Chanzy. He is the author of a dictionary of all the Algerian tribes and their subdivisions, which was published by the French government.

YUMA.—Mr. Alphonse Pinart, who lately visited the regions around the Lower Colorado river, thinks that this name, given to the Cuchan or Ko-utchán Indians, near Fort Puma, and to a whole race and linguistic family, is of *Pima* origin. Hervas places the Yumas, from his ancient authorities, between the Gila-Colorado confluent and the Gulf of California. Mr. Pinart has taken a vocabulary of the *Kónino* or *Avésúpi* dialect in Cataract Cañon, Arizona, and this proved to belong to the Yuma family.

## ARCHÆOLOGICAL NOTES.

HENRY SCHLIEMANN'S excavations, made from March 1st to June 5th, 1879, in the "Tombs of the Heroes," on the coast of ancient *Troas*, resulted in some important discoveries. Six of these tumuli were explored. The tomb of Ilus proved to be an agglomeration of earth, the tomb of Ajax, near the Rhœtean promontory, contained a few horse bones only. The greater portion of this artificial hill had been destroyed by the sea in a southerly hurricane. Only a few fragments of Roman brick were found in the tumulus near the southern extremity of New Ilium, and the conical mound on the sea-shore between the villages of Yéni Keni and Yéni Sehir was found to consist of a natural sandstone rock. The fifth tumulus stood on a natural elevation 83 feet high, and proved to contain a gigantic quadrangular tower, probably of the Roman imperial epoch, standing exactly over a circular stone inclosure 4 feet 4 inches in height, and 34 feet in diameter, which consisted of well-fitted, beautifully cut polygons. This enclosure is supposed to be a sacred shrine, erected during the Macedonian epoch, the marks of an iron pick hammer being plainly visible on the polygons. The sixth tumulus, 66 feet high, contained ancient pottery, which was thought to be older yet than the one discovered at Hissarlik. A fragment of a vase bottom, with incised characters, was sent to Professor Sayce, of Oxford, who wrote to Dr. Schliemann: "I do not think it is a real inscription, but it seems to me a bad copy of a cuneiform inscription, made by some one who did not understand the latter, like the bad copies of Egyptian hieroglyphics made by the Phœnicians." In the great trench excavated at Hissarlik a large number of manufactured objects, large jars, owl-headed vases, an ivory seal, a trachyte idol, a treasure consisting of gold and silver rings, ear ornaments, &c., were exhumed. The orientalist Emile Burnouf and Professor Virchow were present at the excavations. A geological investigation of the plain of the Skamander river proved that there were no marine, but only fresh water deposits, and that the theory prevailing among the ancient Greeks, that the sea had once formed a deep gulf in the plain of Troy, was unfounded. On June 19th Schliemann left for Paris.

## ROCK INSCRIPTIONS IN EUROPE.

A learned traveler, M. Emile Rivière, while lately visiting the valley of the lake *des Mervilles*, in the French department of the *Alpes Maritimes*, discovered in this Alpine valley a considerable quantity of designs engraved upon the rocks, representing animals, the heads of horned cattle, arms, hatchets, and other marks of a mysterious nature. M. Rivière naturally de-

sired to investigate the origin of these designs, that were evidently very ancient, and made by two quite distinct processes, incision and hammering. He was still in doubt, when there was placed in his hands a copy of designs discovered in the Algerian Sahara by the Rabbi Mordicai, the analogy of which, with those of the rocks of the lake *des Mervilles* is quite striking. It would appear from this that populations of the same civilization had existed in Morocco and Liguria, at some epoch not well determined, but probably, to judge from the form of certain figures, posterior to the neolithic period. These designs, likewise, are quite similar to those found on the rocks of the Canary Isles.

Now, the remarkable anatomical connection existing between the Gusnches formerly inhabiting the Canaries, and the race represented by the skulls found in the *Cro-Magnon* to which the first inhabitants of the *Alpes Maritimes* belonged, has been pointed out.—*N. E. Journal of Ed.*

#### THE ZULU WEAPON.

The Zulus have two principal kinds of weapons, the throwing and the stabbing, the latter with a long and straight blade. To a Kaffir, this weapon is literally the staff of life. With it he kills his enemy and his game, slaughters and cuts up his cattle, trains their horns, shaves his own or his neighbor's head, does his carpentry and furriery, and countless other jobs of various sorts. In its original form the assagai was essentially a missel; but the renowned Chaka, among other military reforms, converted it into a shorter and heavier stabbing spear, unfit for throwing, and only to be used at close quarters. The shaft, with an average length of nearly five feet, and a diameter equal to a man's little finger, is cut from the assagaitree (*curtisija jaginea*) which is not unlike mahogany. The wood is brittle yet elastic, the latter quality giving the spear that peculiar vibratory motion on which its accuracy of flight so much depends. On account of the brittleness, a novice will break many shafts before he learns to throw his assagai *secundum artem*. Inaptly cast, the shaft as soon as it reaches the ground is liable to whip forward and break off short above the blade. The assagai heads are generally blade-shaped; some consist of a mere spike, and a few are barbed. When the first shape is adopted, whether with or without the barb, there is invariably a raised ridge along the center of the blade, which is concave on one side and convex on the other. The reasons assigned for this peculiarity of form are that this acts like the feathers of an arrow, and that as the heads are always made of soft iron they can be more easily sharpened when blunted by use.—*Public Opinion.*

## EDITOR'S BOOK TABLE.

## EXCHANGES.

*North American Review*.—The August number has an interesting article by Richard Wagner—an autobiography. The *Diary of a Public Man* brings out some interesting and new facts in the political history of the war. The most valuable article to our readers, however, is that by John Fisk, on recent works on ancient history and philology. The books mentioned in the last article are such as every ethnologist should possess. They are as follows: Pezzi's *Aryan Philology*, Pictet's *Origines Indo-Europeanæ*, Hearn's *Aryan Household*, Keary's *Dawn of History*, Duncker's *History of Antiquity*; also *Village Communities and History of Early Institutions*, by Mr. McClellan; *Primitive Marriage*, by M. F. Coulanges; and *Ancient Society*, Mr. Louis H. Morgan.

*The Historical and Genealogical Register* for July has an interesting article upon the Boundary Line Between New Hampshire and Massachusetts, by Rev. Henry A. Hazzen, being a journal by Richard Hazzen, surveyor, 1741. The book notices in this magazine are always instructive, as the society which it represents is unusually fortunate in receiving the latest works on local and family history. An archæological society located in the West, which could receive such donations, would be exceedingly valuable.

*Bibliotheca Sacra*.—The *Bibliotheca Sacra* for July has two articles upon scientific topics, one a critical exegesis of the Bible use of the word *firmament*, by Charles B. Warring, Ph. D.; the other, *Bible Illustrations from Bible Lands*, by the Rev. Thomas Lowry, D. D. The review of books recently written upon this subject in the last article is very valuable.

*The New Englander*.—This magazine seems likely to grow into the versatile and elaborate character which no other magazine on the continent possesses. The *Nineteenth Century* and the *Contemporary Review* have no counterparts except as the *New Englander* reaches their standard.

*The Methodist Quarterly Review*. Nearly every number of this magazine has a valuable article upon archæology. The July number contains one by Henry M. Baird, D. D.,—Cesnola's Cyprus and Cypriote Art,—in which the author describes the work which that man accomplished during his Consulship. President Lincoln did a great work for science when he appointed Gen. Cesnola as consul in Cyprus. But Gen. Cesnola did a greater work for his country when he sent back his valuable collection and deposited it in the Museum in New York. The whole number of objects obtained was 35,573. Of these 5,000

were lost at sea, and there are now in the Metropolitan Museum in New York 2,100 statues in stone, marble or terra cotta; 4,200 busts and heads; 14,241 vases; 3,719 bottles, cups, etc, in glass, and 1,594 articles of gold.

*Magazine of American History.*—This journal in its department is a model. The original documents and notes contain a vast amount of valuable reference to Indian history and names, making it exceedingly valuable to the archæologist. The August number contains a curious article by James Parton, on the Traditional and Real Washington, being a review of a curious book called Weems' life of Washington. Mr. Parton speaks of the *fiction* of the hatchet, but we really would like to have that author prove the story to be the fabrication of a traveling bookseller, a story invented by Weems, or else leave us to our happy belief in George Washington's truthfulness when a boy.

*The American Naturalist.*—This magazine has an article in the August number by our associate, Mr. A. S. Gatschet, upon adjectives of color in Indian languages; also, in October an article by S. L. Frey, on the ancient works of New York State, under the title of "Were They Mound Builders?" The notes by Prof. O. T. Mason are always good. The *Naturalist* is very fortunate in having so able a corps of editors, and especially in having the aid of the last-named gentleman. The magazine is also very commendable for the variety of its contents, but more especially for its scientific honesty, candor, and kindness of spirit.

*Kansas City Review.*—This magazine has been publishing Prof. Putnam's explorations in Tennessee, with cuts, from the report of the Peabody Museum, and completed them in the September number. There is also in the August number an article by Prof. B. F. Mudge, entitled, Antiquity of Man; also in the September number one on the Home of the Mastodon, from the New York World, describing the mastodon recently exhumed at Newburg. The magazine also contains a great variety of other subjects, and is a remarkably interesting and valuable publication.

*Popular Science Monthly.*—This magazine is always welcome to our table, for aside from its thoroughly scientific character, it always contains something fresh and new on our special subject. For instance, the September number contains, besides a quotation from our own article on European and American Archæology, several quotations upon primitive innocence and ironless civilization, and the color sense in Savages. The literary notices of the magazine always contain something instructive, as the editor is "up" in the latest books and scientific works. We always enjoy reading these reviews.

*American Bookseller.*—Published by the American News Company. This valuable booksellers' journal contains every month an index to the current periodical literature which every scholar should possess. Mr. C. T. S. Davis, the compiler of this index, is a gentleman of scholarly attainments and great skill in analyzing and classifying subjects.

*The Universalist Quarterly.*—The April number of this magazine interested us exceedingly. The articles upon the inspiration of the prophets, by Prof. O. Cone, D. D., and upon the inspiration of the bible, by Mary J. Delong, are very valuable. There is also an editorial upon scientific facts and conjectures which ought to be published again and have a wider circulation.

## BOOKS AND PAMPHLETS.

**EIGHTH, NINTH AND TENTH ANNUAL REPORTS of the Geological Survey of Indiana, made during the years of 1876-77-78.** By E. T. Cox, State Geologist Assisted by Prof. John Collett, and Dr. G. M. Levette. Indianapolis, 1879.

This volume, like all of Prof. Cox's reports, is very full in its descriptions of ancient mounds and earthworks. The book contains no less than six full page illustrations of ancient works. There are contributions in it on the subject, from Samuel Morrison, Dr. G. M. Levette, J. C. MacPherson, besides those of Prof. Cox, himself. We owe our thanks for this volume to Prof. John Collett, who succeeds Prof. Cox, in the Geological Review.

**A HISTORY OF OREGON, 1792-1849.** Drawn from personal observation and authentic information. By W. H. Gray, of Astoria. Portland, Oregon, 1870.

This volume of 624 pages, of finely printed matter, is the best and perhaps the only reliable history of Oregon. The author deserves great praise for thus collecting and compiling so much material, concerning the early history of this new and far off State. He will please accept our thanks for the volume so generously forwarded to us.

**SKETCHES OF MISSIONS IN AFRICA.** By Pres. S. C. Bartlett, D. D. Published by the A. B. C. F. M. Boston, 1879.

While English and American travelers are opening the dark continent to our view, and English armies are subduing the dark-skinned inhabitants, American missionaries are endeavoring to throw the light of the Gospel into their darkened minds. The missionaries of the American Board in the A. B. C. F. M. among the Zulus alone, number twenty-two. Central Africa, so fully made known by Dr. Livingstone and Henry M. Stanley, has not yet been occupied, but arrangements are being perfected for the work.

**THE BUILDING AND VOYAGE OF THE GRIFFON IN 1697.** By O. H. Marshall. Reprinted from the publication of the Buffalo Historical Society. Vol. I, No. 7. Aug. 1879.

What Mr. O. H. Marshall undertakes to do he always does well. In the line of early American history he is without a peer. The work that he has done in identifying historical localities is exceedingly valuable. In this pamphlet, he has proved



that the mouth of the Cayuga creek is unquestionably the true locality where the the *Griffon* (*sic*) was built. If Mr. Marshall will next solve for us the mystery of the Griffon's final wreck and disappearance, one point in early history will be cleared up. We hope that the author may be spared to give us many more contributions in this line of research.

MADISONVILLE EXPLORATIONS. Appendix A, of Prof. Short's forthcoming work.

The Literary and Scientific Society of Madisonville, Ohio, is very fortunate in having such thorough and judicious investigators among its members. Dr. Charles L. Metz, Hon. Joseph Cox, H. B. Whetsel, Charles F. Low, and the Secretary, Frank W. Langdon, are doing good work. If these gentlemen will hereafter send us the report of their explorations, we shall be much obliged.

REVUE DE LINGUISTIQUE ET DE PHILOGIE COMPARÉE RECUEIL TRIMESTRIEL. Par. M. Girard De Rialle. Avec Le Concours de MM. Emile Pigot et Julien Vinson, et La Collaboration de divers Savants Français et Étrangers. Tome Douzième Fasciculi 3. Juillet, 1879. Paris, Maisonneuve, 1879.

Traiti du décret et de l'arret divins par le docteur Abd-ar-Razzav. Guyard. Du parler des hommes et du parler des femmes dans la laegue caraïbe. Lucien Adam. Note sur le parler des hommes et le parler des femmes dans la langue chiquita. —V Henry.

Lee basque navarraais-espag nol a la fire du VIe, Siecle, Julien Vinson.

THE SCULPTURES OF SANTA LUCIA COSUMALWUAPA IN GUATEMALA, with an account of travels in Central America and on the Western coast of South America. By S. Habel, M. D. Smithsonian contributions.

This is one of the most valuable works published by the Smithsonian Institution, which has done so much to advance the Science of Archæology and Ethnology in this country. The eight plates of superb engravings are a whole volume in themselves, being suggestive of a symbolism which, though little understood, is worthy of profound studying.

ANALES DEL MUSEO NACIONAL DE MEXICO. Tomo I. Entrega 6a.

This work will be reviewed by our associate, Ad. F. Bandler, in our next number.

#### NEW BOOKS.

"Prehistoric World," by *Elie Berthel*; will be published soon by Porter & Coates, in an English translation.

*Martin R. Delany*. The Origin of Races and Color; with an Archæological Compendium of Ethiopian and Egyptian Civilization. Harper & Bros.

*Rev. Joseph Wold*. The Lost Ten Tribes and 1882. J. Huggins, New York. The N. Y. Herald speaks of this pregnantly funny book, with its mystic title, as follows: "It settles slapdash

the fate of the world, according to Revelation, interpreted by the four r's through a blind alley in the Great Pyramid. . . . . When he comes to Armageddon, he gives the beast "Rome" many a whack of his prophetic wand or shillelah over its horny head."

*Henry, V.* Esquisse d'une grammaire raisonnée de la langue aléoute, d'après la grammaire et le vocabulaire de Ivan Véniaminov. Paris: Maisonneuve & Co., 1879. 8°.

*Lenormant, François.* Lettres Assyriologiques; seconde série: études accadiennes. Paris: Maisonneuve & Co., 1879. 4°. (Forms the first section of volume third.)

*Oppert, Jules:* le peuple et le langue des Mèdes. Paris, 1879. 8°.

*Van Eys, I. W. J.* Grammaire comparée des dialectes basques. Paris, 1879. 8°.

*Ürsel, le compte Charles de.* Sud-Amérique. Séjours et voyages au Brésil, à la Plata, en Bolivie et au Pérou. Paris: Plon, 1879. 12°.

*Bérenger-Férand, L. I. B.* Les peuplades de la Sénégalie; ethnographie, mœurs et coutumes, légendes. Paris: E. Leroux, large 8°. 1879.

#### LATEST NEWS.

Rev. Joseph P. Thompson, D. D., LL. D., who recently died at Berlin, was one of the best Egyptologists of this country. He furnished notes to the Bibliotheca Sacra a few years ago, which were very valuable. We had hoped to secure his services for this journal, but a letter sent to Berlin did not reach its destination till after his death.

*The American Association for the Advancement of Science.*—Some very interesting papers upon the subject of anthropology were read at the Saratoga meeting, Aug. 27 to Sept. 2. They were as follows: The Ethnical Influences of Physical Geography, by Daniel Wilson; The Sign Language of the North American Indians, by Garrick Mallery; four papers upon the Superstitions of the Ancient Inhabitants of the Mississippi Valley, relative to the rabbit, serpents, the owl and thunder, by J. G. Henderson; Exhibition of Archæological Objects, by S. S. Haldeman; Archæology of Champlain Valley, by George H. Perkins; Archæology of Missouri, by H. H. Russell; Notes from Japan, by Edward S. Morse; A Polished Stone Implement, by John M. Currier; Amber and Jade, by Mrs. E. A. Smith; Hereditary Transmission, by Louis Elsberg; Ethnological Map of the Islands of the Pacific Ocean, by Albert S. Bickmore; The Stone Implements and Pottery of Southern Mound Builders, by F. W. Putnam.

*For Sale at the Antiquarian Office.*

### BOOKS BY THE EDITOR.

#### THE ASHTABULA DISASTER, by REV. STEPHEN D. PEET.

A thrilling narrative of this terrible event, written by an eye-witness. It contains a description of the wreck, personal incidents, an account of the suicide, and biographical sketches. The Memoir of P. P. Bliss forms an important part of the volume. 208 pages, 8vo, bound in cloth, illustrated by six full page wood cuts, including the portraits of Charles Collins and P. P. Bliss and wife. Price \$1.25.

#### THE LOCATION OF THE INDIAN TRIBES IN THE NORTH WEST AT THE DATE OF ITS ORGANIZATION, by REV. STEPHEN D. PEET.

A pamphlet, 16 pages, 8vo, containing a description of old maps, and a list of the various Indian tribes, with their locations, and short descriptions of their villages and encampments. Price 25 cents. Reprint from the ANTIQUARIAN.

#### THE BIBLE NARRATIVE AND HEATHEN TRADITIONS. The Traces of the Facts Mentioned in Genesis in the Traditions of All Nations.

By REV. STEPHEN D. PEET. Reprint from the ANTIQUARIAN.

A Pamphlet. 12 pages, 8vo. Price 25 cents.

#### A COMPARISON BETWEEN THE ARCHÆOLOGY OF EUROPE AND AMERICA. By REV. STEPHEN D. PEET. Reprint from the ANTIQUARIAN.

A paper read before the American Association for the Advancement of Science, at the session held at Buffalo, Aug. 26, 1876. 14 pages, 8vo. Price 20 cents.

#### A MANUAL OF ARCHÆOLOGY, being a Complete Analysis and Compendium of the Science, designed especially for beginners. By REV. STEPHEN D. PEET, editor of the AMERICAN ANTIQUARIAN.

This volume has been prepared by the author as an elementary work, but has for several months been awaiting publication, for various reasons, one of them being the rapid accumulation of work in connection with the ANTIQUARIAN, which has prevented its completion. The table of contents and prospectus of the book will be sent free on application to the author.

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No. II.

## THE MOUND BUILDERS.

BY J. E. STEVENSON.

Read before the Muscatine Academy of Sciences, Dec. 2d, 1878.

"There is a temple in ruin stands,  
Fashioned by long-forgotten hands."

The mounds that, with rare exception, crown every eminence fronting the great Father of Waters on the east and west, whether they be of temple, tower, pyre or dwelling, are all that time has left us of a people who have long been extinct. Who they were we know not, where and when they originated as a distinct people is equally obscure; their language is as dead as their bones; their habits and customs are the subjects of vain conjecture; the days of their pilgrimage on these beautiful hills and prairies a matter of scientific speculation; their chief men are unknown; their tribes unnumbered; their bones are dust, and their implements, utensils and ornaments the toys in the hands of children of a later race and a generation who are successors to their inheritance. Their name even is unknown, and they are called Mound Builders.

Who these Mound Builders were; when they existed or what their government, habits, religion, arts, etc., we shall not undertake to answer. These are problems for science to solve; I shall only give a few of the impressions which I have received from an attentive study of these works, as together we have been engaged in exploring them for the three years past.

That such a people did exist here we have positive proof in the thousands of mounds in the Ohio and Mississippi Valleys. That they were endowed with a degree of intelligence superior to that of the nomadic tribes of Indians who succeeded them and preceded us, and that they worshiped (to us an unknown)

God or Gods is evident. That they revered and honored their dead, they have left us ample proof. That they were a peaceable and industrious people is shown by all that is legible of their history—their works. What invasion and destruction by enemies, or famine or pestilence overwhelmed and exterminated them, or whither they went when they departed, is cloaked by time and shrouded by mystery. Time, long and unending time, has long since rounded and completed the period of their existence, as even now a new cycle is in like manner about completing the destiny of the Indian.

Our beautiful city is reared in the shadow of a mighty past, and the white farm houses that peer out from the beautiful natural groves crowning our bluffs, are built upon and surrounded by the graves of a departed and absolutely extinct race of human beings. Until within a few years past, the aggressive Anglo-Saxon has been content with plowing down and digging up (as suited his convenience in cultivating and improving) the traces of this forgotten people; and if a fragment of a bone or a piece of pottery attracted his attention it only recalled to his mind the accomplished destiny of this Race. These remains of works and mounds have generally been regarded as the work of the Indian and, being so common, elicited but little attention. But scientific research has at last attracted to these mounds and tumuli of a prehistoric man a universal interest. Scientific investigators are delving into the mysteries of the caves of Europe, and the mounds and stone wall ruins of America, and from a few facts gathered here and there, have peopled this old world in prehistoric times, with a race of men heretofore unknown; a people whose implements of war and peace were roughly chipped from stone or made of bone; whose habitations were caves or rude attempts at building; whose wants were few and simple, and mainly supplied by nature. In fact just such a people as common sense will associate with the natural surroundings, conditions and circumstances of primitive man. The remains of early man are not confined to any particular country or locality, and are missing nowhere in the inhabitable climates. In the cemented grave and beneath successive lava beds of dead volcanoes of the Sierra Nevada mountains, hundreds of feet below the surface, the bones of man are found, and with them those of the mastodon. In the caves of Europe intombed beneath successive floors of cave, earth, gravel, fallen rock, and calcareous deposits of great depth, with the bones of the cave bear, woolly rhinoceros, Irish reindeer and mammoth (all extinct species), are the bones of man. Among the glacial boulders and drift deposit of quarternary date are found the wrought stone implements of man.

What natural inducements persuaded these ancient aborigines to so densely people this district we may with some certainty arrive at, by studying the topography of the country in this vicinity as it then was. The Mississippi has cut its channel over and into what once was the bottom of an inland sea at the close of the glacial period—rapidly at first, through the light deposit or sediment,—slowly through the calcareous and sandstone rocks which persistently held the water in check, as for example at Keokuk. At these points the water-scarred bluffs hold the Father of Waters in a tight embrace. Between these points the sluggish waters expanded as the yielding banks crumbled and drifted away, forming small lakes. As the barriers wore down, the waters withdrew into narrower and deeper channels, leaving exposed its shallows and bars to become bottom lands and islands, as we find them now. When the Mound Builders first viewed the Mississippi, it was probably a chain of shallow lakes of greater or less extent, extending from base of bluff to bluff. Where is now bottom-land, from Drury's Landing to New Boston, on the Illinois shore and Muscatine Island, on the Iowa side, traversed with sloughs and dotted with lakes and bayous, were probably swamps, marshes, and shallow open water from eight to ten by twenty miles in extent. This would furnish the Mound Builders abundance of fish and fowl, as it would be a natural resort for both, while at the same time an immense number could live in communicating distance by signal fires, as there was nothing to obstruct the view in any direction over this entire tract. These were the natural physical advantages afforded by this primitive lake over a section of the river confined between close and tortuous bluffs. The seat of government was located at the confluence of the Iowa with the Mississippi, for its strategical advantages, being located in a U like bend of the Iowa.\* Fifteen feet of water above present high-watermark would restore this primitive lake from bluff to bluff, as can be attested by many of our citizens who have had personal experience in vainly endeavoring to stay the angry waters in their headlong course across the island levee, and have seen the roofs of island buildings protruding above a surging sea of water.

Imagine the wierd night scenes presented here for ages, long before the ancient mariner of the so-called old world dared to navigate beyond sight of his native shore lines, when the fires on a hundred hills were gleaming through the gloomy distances, and from bluff to bluff, penciling their rays on the broad smooth surface of water between, and lighting up the stately oaks above,

\*A part of group B and a few other mounds in this locality, are the only mounds I have seen built beneath the bluffs, but they are from twenty-five to thirty feet above present high-water mark.

while on the hill tops nearest could be seen the swarthy forms of the assembled inhabitants, gesticulating in a grotesque dance or performing a barbarous ceremony, accompanied with shouts and the din of many voices and we have an ideal night scene of this primitive lake and its inhabitants thousands of years ago.

I will attempt to show as far as I am able from the facts ascertained by an examination of their works, that the Mound Builders were a distinct race of people from our nomadic Indians. The mounds were ancient,—as I shall attempt to show hereafter—and, as it is the office of time and elements to level all things, we have reason to believe that these mounds were much larger when built, than now, for they have settled until the soil composing them is as compact as the clay of the bluffs, and the rains and winds of many years have eroded their surface, but still they are large, and, at the same time, are very numerous.

The first fact, then, that is plainly evident, is, that immense labor and united effort was required to erect them, with the rude flint implements to dig, and the pots, skins or baskets to carry dirt. An average mound contains about fifty cubic yards of earth. A cubic yard of earth will average about two loads for a two-horse team, as usually drawn upon our public works, or one very large load. It would take four men, with sharp, bright steel shovels and picks, and one team, about four days to build a mound, which would compare with an average tumulus. Estimating that one man with modern appliances, could in one day accomplish as much as twenty-five Mound Builders, with their crude appliances, then it would take one hundred Mound Builders as many days to construct a mound, or it would take one Mound Builder four hundred days of uninterrupted labor, or more than one year. Then allowing one-half of his time for procuring a subsistence by arrow making, hunting and fishing, and for winter months and unfavorable weather, one-third of a year, and we find that it must have taken this primitive man, in fact, about five years to erect a mound. Then if we take one of the mounds containing, say five hundred cubic yards, it would have employed him during an ordinary lifetime. In all the research thus far made, no evidence is found of other than the simplest appliances for this work, or that the Mound Builders were the owners of burden. The point is, the Mound Builders were characteristically workers. That the Indian is characteristically indolent, imposing all labor upon the squaw, and devoting his time to war and the chase, requires no proof. Their dead are deposited in shallow graves, generally open, or tied to limbs of trees. Some of their graves are covered; but a spade of earth removed, exposes the remains cramped for room, as if they had been buried in a post-hole. Often, numbers of

men, women and children, are piled promiscuously together, as if to save the labor of a decent burial. We have several times unearthed these bone piles when excavating a mound. Aversion to labor is one of the most clearly marked traits of the Indian, and is the chief obstacle in the way of his civilization. He is a pensioner on the bounty of the government, and though amply provided with the implements of husbandry will, when hunger arouses him, resort to the chase or murder and pillage. Take men who can patiently toil for years, or a lifetime in piling earth, building rude cities, towns, temples, beacons, sacrificial and sepulchral mounds, and substitute their rude implements by better, and they would be as likely to accept them as the farmer the iron mould board plow for the wooden, the steel for the iron, the sulky in lieu of all.

*The industry of the Mound Builders is one of the points impressed upon us as one of the results of our observations.* It may be said, however, that the citizens of Muscatine enjoy unusual advantages for the study of this mysterious people. Few localities present more numerous works of the Mound Builders; and, in fact, it would seem that this region was made the center of a large population. The villages, defenses and burial places of this strange people were scattered over this region and have left marks of their presence and long habitation upon nearly every hill-side.

From an imaginary point near Drury's Landing, a few miles above or east of our city, to another like point, and down the river near Toolesboro and New Boston, distant from the first point some twenty miles, the bluffs (once the Mississippi river shore line), recede from each other some eight miles, and upon all the highest points are found groups of mounds numbering all the way from two or three to one hundred or more, varying in size from fifteen to one hundred and fifty feet in diameter of base and from two to fifteen feet in height. Various examinations have been made of these mounds at different times by various persons, and the endeavor has been, by close and careful observation and examination, to learn somewhat concerning our Muscatine Mound Builders. I will, therefore, first give a detailed description of the examinations made of some of the mounds of several of the many groups, though it may be well to note that the explorations thus far made are comparatively superficial. Considering the immense number clustered upon the bluffs in the entire circuit of about fifty miles, from Drury's Landing to New Boston on the Illinois side, and from Toolesboro to Muscatine on the Iowa side, the developments thus far made are probably insignificant compared with what will likely follow in the future. No knowledge has yet been gained of the number of



mounds in this circuit, but, judging from what we have seen, fifty mounds to the mile would be a low estimate, and this would make two thousand five hundred mounds, exclusive of earth works, in this single locality.

The mounds are generally built upon the original surface of the ground, and if erected for burial purposes, the bodies were usually placed upon the level ground and the earth heaped above them. One exception to the rule might be mentioned: A mound was opened near the village of Toolesboro, where the soil had been removed and the original structure erected on a clay bed. The clay in this vicinity is so hard as to resist the efforts of those who dig below the surface except as the pick has been used. At what depths the relics might have been found if the excavations had been carried further we do not know. But in most cases the undisturbed soil is generally an indication that the erection was above the surface; though we learn that at Davenport, relics have been discovered at a depth of nine feet. An evidence of the work involved in constructing these mounds, is given in the difficulty with which the earth, of which they were composed, was gathered. There are occasionally depressions in the soil in this vicinity which show that the earth was taken from the surface. The depressions vary from a few feet in diameter to five or six rods. The depth of excavations in this region was but two or three feet; though we learn that in other localities, as, for instance, in Wisconsin, excavations are found so deep that a man could stand in them and his head be below the level. My opinion is that the people, with their rude implements, were obliged to strip the light soil from the ground surrounding the mounds and, with baskets or rude contrivances, would carry the earth and deposit it with their hands, upon the burial heap. The distance of the excavations from the separate mounds in this locality is generally but a few rods; though in other places we find that the soil has been carried long distances.

Another proof of the industry of the Mound Builders is their mining operations, principally for copper. They mined and wrought it as stone and evidently so regarded it, as there is no evidence that they smelted the ore. The Indian knew nothing of the mining of copper, by tradition or otherwise. Copper was a favorite of the Mound Builder, its pliability enabling him by pounding, to work it into various ornaments, axes, chisels, awls and sheet form, as found in the Toolesboro mounds. This copper is known as Lake Superior copper, and was there mined. Trenches are there found many feet deep, filled with the decayed and decaying trunks of successive ancient forests, large blocks are therein found detached from the native ledge and removed from their matrices and surrounded by stone axes, chisels and

vessels for bailing water. The axes are the same as found in a mound by Mr. Leverich. The finding of the copper axes in the Toolesboro mound goes to show that they who worked the Lake Superior mines built the Muscatine mounds and deposited the copper, and that they were not Indians.

Located about nine miles south west of Muscatine, on high bluffs overlooking Muscatine Island, are eleven mounds (group G), arranged in a row along the edge of the bluff. These were examined last summer by a party composed of Messrs. Betts, Leverich, Lauder, Sternaman and myself.

They were well defined and at regular distances apart, of about twenty feet. Were composed of clay and gravel, the foundations seemed to be composed almost entirely of gravel. One or two however contained but little. Seven of these mounds were opened. The first and largest one yielded only flint chips and charcoal, one or two not even these. An Indian's remains were removed at a depth of about eighteen inches from the top of one of the mounds opened by Mr. Leverich, and about two feet below the Indian remains, Mr. L. found the skull of a Mound Builder; and beneath it a stone axe, such as are frequently picked up in the vicinity of the river bluffs. The finding of a stone axe in this position, corroborated by the finding of the same implements in large numbers in the copper mines of Lake Superior, prove them to have been of Mound Builder's origin; though they might have been subsequently used by the Indian.

Copper was not used by the Indians. I have yet to hear of a single copper axe being found on the prairies, or at any considerable distance from the mounds; which would likely be the case if they were extensively used by the Indian, or had they been used for any purpose by the Mound Builder so far from his habitation; though they were an instrument no more liable to be lost than the owner's bow and quiver.

*In arts* the Mound Builders were well advanced for people of a Neolithic age. In their mounds, especially those in Toolesboro, have been found finely and artistically wrought pipes and vases. Some of the pipes there obtained are beautifully carved in representation of birds, frogs and animals, some of them with pearl eyes. The vessel taken from the first mound opened on Messrs. J. & H. Parsons' field is truly artistic in outline and design, and elaborately ornamented. The lines are regular and uniform. One figure represents the impression of a dog's foot, which considering that we have no evidence that they were owners of this pest of civilization is an interesting discovery. It may, however, have been intended to represent the foot-print of some other animal. Their stone and copper implements are generally artistically worked. The fragments of pottery thus

far obtained, show a high degree of perfection in the art of making an ornamentation. The etchings are remarkably regular and perfect, and the designs beautiful. From mounds in this same group were taken copper axes covered with an oxide the exact fac-simile of cloth that had come in contact with the metal. The fiber and style of weaving is thus accurately preserved and in this manner will preserve an indefinite length of time.

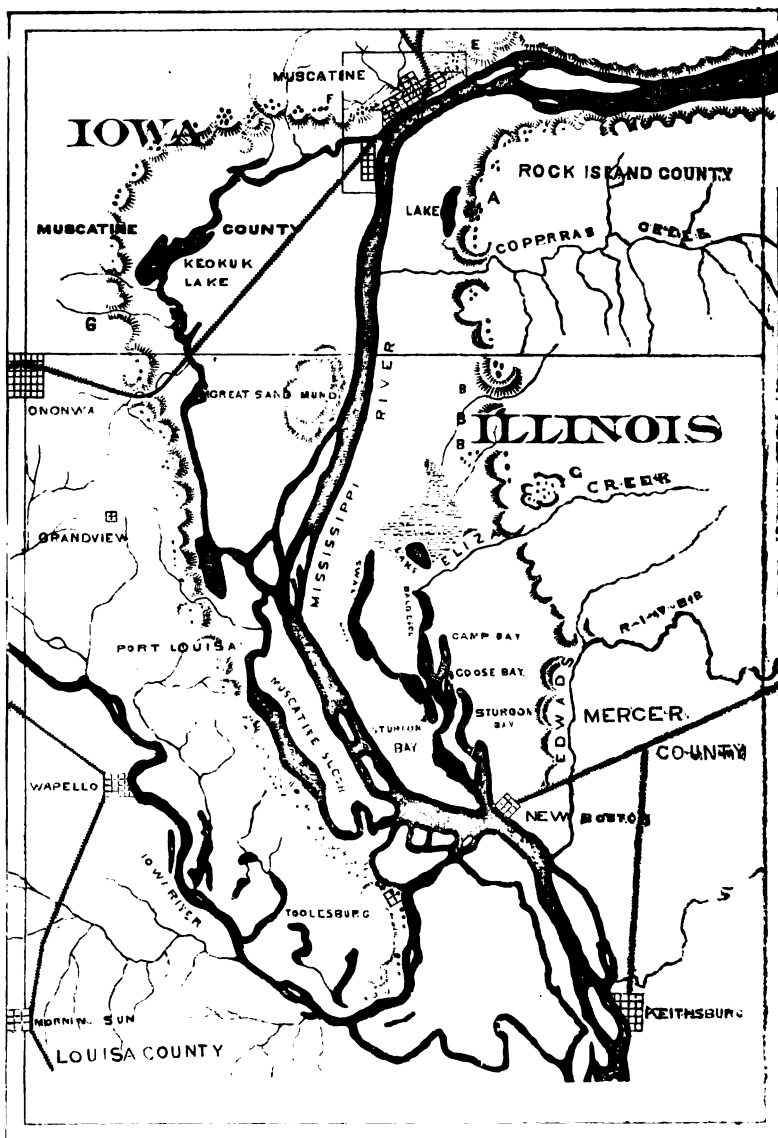
The Typical Mound Builder's pipes were different from any which the Indians possessed. The difference between them, is probably familiar to most of our readers. Two finely wrought pipes were found in the hands of skeletons which were exhumed from the mounds of this vicinity, the stem being about an inch in width and one-fourth of an inch thick, projecting about three quarters of an inch each way from the bowl, and slightly curved downward. One of the projections being bored, was used as a stem, the other to hold with the fingers. The cavity of the bowl was one inch deep and a little more than one-half inch in diameter. One of the pipes was made of a stone, likely steatite or soapstone, hardened by fire. The other pipe, in outline the same, was made of a very hard substance, resembling pounded flint and clay. No war implements or stone or visible remains of clothing were found.

Who taught the Mound Builders the use of the pipe will, I may safely say, never be known; but it is possible that the Indian learned this accomplishment from the Mound Builder, and it is a fact that the European learned from the Indian. This must have been a general habit, and indulged in by the women as well as by their lords, for in the one mound four skeletons were exhumed lying side by side, two of which were pronounced females, each of which held in their hand a pipe.

The Mound Builders were evidently a *commercial people*. It is true that the Indian bartered, but not in the sense in which I apply it to the former. In the Toolesboro mounds was discovered a conch shell which probably came from South America, and in one of the mounds in the group was a salt water shell. Add to these facts another, that Lake Superior copper is found in Peru, Central America and Mexico, and we are warranted in believing that the Mound Builders mined the copper not for themselves alone, but as an article of foreign commerce in exchange for shells and other commodities from these countries. They may have obtained their fine cloths from looms of Peru, or the ancient cities of Palenque and Copan, traces of which were found at Toolesboro.

The presence of copper implements in this vicinity has been discovered. Two companion mounds were excavated by a company of us in the vicinity of Toolesboro. In one of them a





copper axe or chisel was discovered amid various fragments of bones, charcoal and a decayed mass of wood. The axe measured five and one-eighth inches in length, two and one-fourth inches in width at the blade, seven-eighths of an inch at the pole, with an average thickness of five-eighths of an inch, and weighs one pound. It is of soft copper, roughly pounded into shape. On a level with this axe, but distant about eight feet, a beautiful earthen pot\*, was discovered, which bore unusual marks of ornamentation. It was five inches in depth and six inches in diameter at the widest point. The bottom is conical making it necessary to suspend it in order to hold its contents, or to slightly hollow the earth beneath it. Close to it was found a miniature pot about the size of an ordinary egg shell, but in such a condition that it could not be removed. Near the vessels were many fragments of bone and teeth, and beneath them charcoal and flint chips were found. In the other mound there was discovered, at a depth of about six feet, a fragment of sheet copper which weighed two hundred and sixty grains. It was four and one-eighth inches long, two inches wide and about the thickness of ordinary tin. It is very slightly curved and much corroded. It was found in the bottom of the mound lying in the midst of puddled clay. This bottom was dish-shaped, rounding up at the edges, one foot deep, and six or eight feet across. This huge clay saucer was below the general level, and this fact accounts for the absence of bones or the body or any other relics which might have been associated with the copper. The two mounds containing these remarkably fine specimens were exceptional: standing out of line and away from the bluff some forty rods, and measured by tape-line about forty feet across the base, and five feet or more in height. The ornamentation upon the pottery discovered was, however, the most remarkable, indicating a high state of art in the people who constructed it.

As to the *architecture* and engineering skill of the Mound Builders, little can be said at present. The mounds of this vicinity are, with few exceptions, built along the edge of the bluff, which is high and steep. Some of them, however, seem to have been erected with a view to the scenery surrounding. From the summit of a high mound which stands within the village of Toolesboro, near the junction of the Mississippi and Iowa rivers, nineteen miles south of Muscatine, an extensive view is obtained; it overlooks the valleys of both rivers, and commands a view of the Illinois Bluffs some eight miles distant. No more beautiful site could have been chosen for the ancient abode of the Mound Builders. The bluff line on which these mounds are located form a divide between the two rivers. Within a few hundred feet of the edge of the bluff there are small springs

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\*See cut.

where head streams which flow south and west to the Iowa river. In another locality farther to the north the mounds are grouped together, twenty-five or thirty in number, and arranged apparently in parallel lines, the whole embraced within a plot of twenty-five or thirty rods in diameter. This group is found at the south of a good-sized lake called Muscatine lake or slough. From this group there extended westward an earth-work or causeway to another row of mounds about forty rods distant. This earth-work runs in a straight line but there is a jog in it or break, where is found a depression in the ground about eighty feet in diameter. The ends of the two lines are about a rod apart, but both walls follow the same direction. There is, also, in the vicinity of Toolesboro, the outlines of what was once a circular earth-work, resembling a horse-shoe; the open part abutting upon the edge of the bluff among a group of mounds. The position it occupies indicates that it was used for defensive purposes. Its surface is covered and its soil is filled with an immense quantity of broken pottery, and innumerable chips and flint instruments. The implements were nearly all small, uniform in shape and size, and in shape representing the half of a cone. They were in size one and one-fourth of an inch in length, three-fourths of an inch at the widest part and three-eighths at the thickest point. They may have been placed in a wooden frame, thus resembling an instrument which may have been a saw. The remains of what appeared to be stone walls were also discovered. Three miles south of Toolesboro, near the Iowa river, we found the outlines of three rude, ancient structures, in which stone was used. This stone had been taken from the river below, and consists of granite boulders. There seemed to have been five or six of these structures in a row, nearly parallel to the river bank, about twenty feet from it, about six feet square and some twenty feet apart. But few stones are left. Opening the best preserved of these we found strong evidence of fire. The bottom was rather dark and burned for two inches in depth almost like brick. A double row of slight depressions alternating with these remains could be seen. In some of these we found charcoal, flint chips and a considerable quantity of bones. These pits were less than two feet deep. The bones were not of human remains. They were well-preserved and seemed to have been split and broken. No mounds are known to exist on this bottom. The nearest are a half mile distant on the extreme southern point of the high bluff extending into the bend of the Iowa. Mr. H. Parsons says these remains were in a much better state of preservation when he saw them forty-three years ago. Most of the rocks have been removed by the farmers in the vicinity. The Indians knew nothing of the use of these apparent furnaces.

Ordinarily the mounds follow the line of the bluffs overlooking the Mississippi river. The system which ruled in the location of these structures on the spots where they were found has not been fully discovered, yet it is possible that a distinct plan of signal stations and look-out mounds might be traced here. The fact, however, that in nearly every case where mounds have been excavated, human remains have been found, would indicate that they were erected for burial rather than for a military purpose. A few exceptions to the general system of burial mounds located upon the summits of the bluffs have been found near the limits of Muscatine, where are about fifty mounds, some of which are long, resembling earth-works. Again, nine miles north of Muscatine, on the Cedar River, at a distance from the Mississippi bluffs, are eight or ten mounds arranged in two parallel rows; also, fifteen miles east of Muscatine there are about twelve mounds, six of which are located upon the bluff and six upon the bottom lands, not exceeding twenty-five feet above high water mark. This is the only case which we have discovered, of mounds so situated; though we have learned that among the emblematic mounds of Wisconsin it is quite common to find not only a complete system of signal stations, but frequently mounds are found upon the bluffs overlooking those upon the bottom lands, as if a system of protection against approach by water was designed. Not the tenth part of the groups embraced in this territory have been even glanced at. It is probable that from further study much more would be discovered in reference to their military designs, or of the plan which ruled in their location.

The *mode of burial* among the Mound Builders is another distinguishing feature which has been illustrated by these investigations. I will first ask the attention of the reader to a group, which I will designate as group A, being the first group I had the pleasure of examining. The following groups will be designated on the map as B, C, &c., in the order of their examination. This group consists of five well defined mounds and as many more that are discernable. They are located upon a high, steep bluff, overlooking a broad expanse of the Mississippi river, north and west, and facing the city of Muscatine. They were first examined, and one of the mounds opened by Mr. Reppert, in 1874, who removed the remnants of two skeletons, too much decayed for preservation. In 1875, in company with Messrs. Hobby, Cock-shoot and Mattison, of Wilton, I assisted in a re-examination of the same mounds with the following results: The first mound yielded a large quantity of fragmentary human bones, teeth, burned clay, charcoal ashes, and a pipe. The charcoal, burned clay and ashes were about five inches above the bones, as if the body had been covered, and a fire built upon the grave. The



bones also showed unmistakable traces of fire. The mound was composed of clay, and black soil, was wet, and the bones so badly decayed, except those that appeared charred, that the position they were in after burial could not be determined. The indications were not clear enough to warrant a conclusion as to the mode of burial in this case, whether inhumation was intended or cremation. If the latter, it was a partial failure. The second mound opened was the largest in the group and was composed of sand and clay, poorly adapted to the preservation of bones. We dug a trench through the mound of about four feet in depth from the apex, but only found slight traces of human bones, a large quantity of what appeared to be ashes, and few bones of a small rodent that had evidently burrowed into the mound and died. The third mound opened was between the two first described, and was the one dug into by Mr. Reppert, as first stated. It was smaller than the others, and though only a few feet away, was composed of a hard white clay, covered by black soil, and was very hard to dig into without the use of a pick. In this mound we recovered at a depth of one foot, several pieces of an ornamented earthen pot, evidently composed of clay and pounded flint, which were in a good state of preservation. At a depth of about three feet we discovered the larger bones, (femoral) of two persons lying close together and on their left sides. After much hard and careful work, mainly performed with a knife, we succeeded in exposing the entire skeletons, much of each however only being outlined with bone earth. By skillful handling the skulls supported by the mass of solid earth within, were placed above ground. They were flattened on their sides by the weight of the superincumbent earth, and in addition thereto, had every appearance of having been crushed in by some blunt instrument before burial, as a piece of the skull bone the size of two fingers was driven into the cavity of the cranium beyond the other parts. The fracture corresponds with the size and shape of the pole of one of their ordinary sized stone axes. Dr. Hobby pronounced both skeletons to be those of females, and perhaps were the wives or servants killed and buried with one of the other bodies removed by Mr. Reppert. Two finely wrought pipes were found in the hands of the skeletons, in as good condition as when deposited, possibly a thousand or more years ago. These have already been described.

The four skeletons, I find by comparing notes with Mr. Reppert, were lying side by side, about a foot apart at the base of the mound, and on a line with the general level, with their heads a little east of north. The pot I mentioned having found, seemed to be composed of clay mixed with sand or pounded flint, mica and shell, was ornamented with niches about the outer

edge of the rim, and below this about half an inch was a line running around the vessel and one and one-half inches below this, another, the space between the two being filled with small round indentures. The vessel, from the fragments, appears to have been symmetrical in its proportions, and capable of containing about two quarts. A fourth mound in this group was opened last spring by Mr. Reppert and myself, assisted partly by Messrs. Lauder and Thompson. This had the appearance of being a small mound, but on examination it was found to have partly washed down the bluff side when the bluff was being cut away by the waters of the river, now much lower and confined in a channel one and one-half miles distant. Its situation on the edge of the bluff rendered it easy to work. I had excavated an opening in what appeared to be the center of the mound about three feet square and to the bottom three years before, but found nothing. We now proposed to experiment by thoroughly opening the mound, commencing at the general level on the sloughed side, throwing the dirt down the steep decline, which we did, discovering two skulls some two feet apart, the bodies having been placed with their heads to the north. Close up to the head of one which proved to be a very old man, we found a vase, capable of containing about two quarts, composed of flint and clay, and indifferently ornamented; the markings being a row of small protuberances about one inch below the border of the rim, made by punctures from within with a small round instrument about an eighth of an inch in diameter, and irregular markings about the vessel as if made with a row of corn kernels. We also found close by the skull a stone pipe very much like the one found in the third mound; two flint arrow points; three flint implements and six sharp flint chips. The earth was the same as in the third mound; no ashes or charcoal. The lower jaw of the person around whose head was deposited the above described implements, contained only the front teeth, the molar or double teeth were lost long enough before death for the bone to fall away by absorption, showing that the individual had attained a ripe old age. I have assisted in exhuming a great many Mound Builders' remains, and when the jaw has been preserved, have never discovered a tooth missing with this exception, and always in a good condition, though often squarely worn below the line of the enamel, no nerve cavities have been exposed or other evidences of decay. The Mound Builders evidently had but little use for a dentist.

Group H, located on a high bluff on the south bank of Copperas creek, Rock Island county, Illinois, and about five miles south of Muscatine, were explored last summer, by Messrs. Lauder, Leverich, Lewis and myself. They were three in

number, extending north and south, and of moderate size. The middle one was the first one opened, and stood some feet lower than the one to the south, which stood more nearly on the brow of the bluff. This mound proved to be an interesting one, and every spade of earth thrown out excited the liveliest imaginations of the scenes once enacted here. It was about four feet high and twenty feet in diameter, in the center of which, from top to bottom, and from five to six feet across, was one solid mass of hard burned clay and calcined human bones; the fragmentary remains of from ten to fifteen persons. These bones were nothing more than white powder, save a few charred bones on the outer surface of the mass. From the center of this mass was taken a true Mound Builder's pipe. An event most extraordinary has here taken place. Human bodies have here been burned in a fierce fire. If the Davenport tablet is not some base forgery it may have commemorated this or a similar remarkable ceremony. On this tablet is represented a mound about four feet high, (the height of this mound) from which ascend upward a dense column of flame and smoke; at the base of the mound lie three prostrate human forms, while fourteen more victims are marching up, yoked neck to neck. All the tribes from Toolesboro and New Boston, we will suppose, are assembled, at the summons of signal fires, and the sun and moon are represented as witnessing the scene, and what is no less remarkable, all the stars are out.

How many nights the fierce flames lighted that hill or what orgies were enacted, we are left to conjecture. In the surface soil was found a piece of lead ore, weighing about one pound. Near the surface of the south mound we removed the bones of a large number of Indians, men, women and children, and beneath them, about three feet, Mr. Lauder removed the skull of a Mound Builder, which he has preserved. Want of time compelled us to quit this mound with a partial examination. It is questionable whether the lead ore found was deposited by Indians or Mound Builders. The mound in which it was found showed no traces of having been previously disturbed, still the ore was found only a few inches below the surface and might have been left there by the Indians. Certainly it was deposited subsequent to the fire as it shows no signs of fusion.

In nearly all mounds are found charcoal and ashes, and in a few, as was the case in the first mound opened in group A, charred human bones. It was doubtful whether this indicated human sacrifice or cremation, but the fact that human sacrifices were made, was established upon excavating the first mound in group H, as has been described. They must, therefore, have worshipped some fierce ideal deity, and the ceremony must have

been considered of great importance, to have required so many victims. It is reasonable to suppose that sacred fires were kept constantly burning on many altar mounds, thus accounting for so many containing charcoal and ashes, and that each was presided over by a priest. As a general rule all mounds contain evidences of fire, though all do not contain bones or relics. Fire was evidently connected with the purposes for which they were built.

Some writers regard the large mounds as temple mounds. If they were used as such, all large mounds do not show it, for the large mounds at Toolesboro show meagre remains of fire and bone while contra, many of the smaller are largely composed of charred bone, ashes and charcoal. It is as reasonable to presume that the large mounds at Toolesboro, were memorial mounds, commemorative of distinguished chiefs, inasmuch as they contain few bones, but the richest relics, whether of pottery implements or pipes, all of which are extraordinarily superior to others more numerous found in the less pretentious mounds. I am inclined to think that their religious rites were everywhere generally observed, that they had numerous priests and no special temple mounds. As burials are generally religiously conducted by man in all ages and conditions of enlightenment, their general mode was probably that of cremation. We have evidence that they practiced both cremation and inhumation. Why the distinction? Scarcely more than one of a hundred could have been inhumed in the few thousand mounds the work of many thousands, or the mounds would instead of containing only one, which is generally the case, or five or six, would contain large numbers.

Many of the mounds contain Indian remains buried from six to eighteen inches deep. The Indian remains are always found in a heap, or buried in a sitting position. The Mound Builders' bodies are always extended at full length on the bottom of the mound. The situations chosen by the Mound Builders being always high and sightly, have suited the Indian's fancy for burial purposes.

*The Antiquity of the Mound Builders.* When these people existed and when these mounds were built is the leading subject of scientific inquiry, and capable of a proximate scientific calculation. In one of the central mounds of group D, stands the stump of a white oak tree, fifty-four inches in diameter, the age of which, counting the circles, is over four hundred and ninety years. We have no means of knowing how old the mound was when the acorn was planted on its summit, but supposing it was deposited with the last pot full of earth, the mound would be at least nearly five hundred years old. There is evidence that this mound is not as old as many which I have

examined, for at a depth of four feet, and beneath the roots of the tree was found the best preserved cranium of any I have seen. It was perfect and the teeth white and sound. Other mounds equally adapted to the preservation of bones, contained only slight traces of bone earth. A mound in group A, has been eroded, like the bluff on which it stands, by the river, which has since receded to its present channel one and a half miles away. Approximate the time it took the river to make this change, and we have the time when the bluff and mound were washed by the waters of the Mississippi, a time sufficient for a considerable forest of large trees to grow upon the new made ground. But, like the first mound, we don't know its age when this record was made. An important question arises, whether it is possible for the bones to be preserved for so long a time, and in answer will say that the bones of a Scythian King, known to have been buried 400 B. C. have been exhumed from a Scythian mound in a good state of preservation. Prof. Whitney also cites an instance of human bones being found more than a hundred feet below the surface, and beneath five successive lava beds, the volcano from which the lava was thrown, showing evidences of being dead for thousands of years. I assisted, a few years ago, to exhume the bones of a mastodon near Wilton that lay buried twenty-three feet below the general level, in a drift deposit, placed there prior to the creation of the river bluffs on which these mounds are built, and these bones were perfect. Professors Marsh and Cope have recently collected a quantity of fossil bones on Talbot Hill, in Colorado, that are now rock, many of them agatized, and estimated by American geologists to be seven million years old, while English scientists declare them fourteen million years old. The earth in many of the mounds is strongly impregnated with minerals, largely of iron, the presence of which assist to preserve the bones. These Mound Builders' bones were deposited in the best possible manner to insure long preservation. A high, dry place was selected, drained in every direction. The body was placed *on the surface*, avoiding in this way contact with any surface water, and then a high, conical mound was erected above it, sufficiently high to turn any amount of rain-fall and afford protection from frost. The earth shortly became dry and compact about the bones, when they are, practically, hermetically sealed from all eroding influences. In this condition it is difficult to estimate the length of time the bones may keep. A majority of writers on this subject claim that these earth-works and the bones they contain are certainly several thousand years old.

## ALASKA AND ITS INHABITANTS.

BY REV. SHELDON JACKSON.

It was sundown as the California steamed out of the harbor of Victoria. Instead of putting out to sea through the Straits of Juan de Luca, the steamer headed to the north-east through the Haro Strait, winding in and out among a thousand islands, until we entered the broader Georgia straits, and for three hundred miles our course lies between Vancouver's Island and the main land, then between smaller islands and the mainland, so that a trip of over a thousand miles is taken in salt water without even getting to sea, the entire voyage being but little different from river navigation. Entering Haro Strait, off to the east is San Juan Island, so long the boundary in dispute between the United States and Great Britain.

Far off to the east, Mount Baker stood in the twilight a great white pyramid covered with snow, notwithstanding its internal fires are still burning. Its crater is now filled up with ashes. During the night we crossed the 49th parallel of north latitude, the imaginary line that separates the United States from the Dominion of Canada. In the morning we anchored at Nanaimo, to take on coal for our long northern journey. The mines at this point raised during 1876, 140,000 tons of coal.

Alaska is an English corruption of Al-ak-shak, of the natives meaning "the great land." It is indeed a great land, covering over 580,107 square miles. It is the great island region of the United States, rivalling in number and size the great Archipelagoes of the Southern Pacific. These islands cover a total area of thirty-one thousand square miles. Stretching along the Aleutian Islands for 1500 miles are sixty-one volcanoes, ten of which are active. The magnificent Shishaldin, nearly 9000 feet above the waves that break on either base, Akuten, Makushin and others are belching out fire and smoke.

*Glaciers.* This is the great glacier region. From Bute Inlet to Unimak Pass nearly every deep gulch has its glacier, some of which are vastly greater and grander than any glacier of the Alps. The American student need no longer go abroad to study glacial action. In one of the gulches of Mt. Fairweather is a glacier that extends fifty miles to the sea—where it breaks off a perpendicular ice wall 300 feet high and eight miles broad. Thirty-five miles above Wrangell, on the Stickine river, between two mountains 3000 feet high, is an immense glacier forty miles long, and at the base four to five miles across, and variously estimated from 500 to 1000 feet high or deep. Opposite this glacier, just across the river are large boiling springs. The In-

dians regard this glacier as the personification of a mighty Ice God who has issued from his mountain home invested with power before which all nature bows in submission. They describe him as crashing his way through the cañon where its glistening pinnacles bordered upon the domains of the River God, and that after a conflict the Ice God conquered, and spanned the river's breadth so completely that the River God was forced to crawl underneath. The Indians then sent their medicine man to see how this could be avoided. The answer came that if a noble chief and fair maiden would offer themselves a sacrifice by taking passage under the long, dark, winding ice arch, his anger would be appeased, and the river be allowed to go on its way undisturbed. When the two were found and adorned, their arms bound, and seated in the canoe, the fatal journey was made and the ice has never again attempted to cross the river. At one of these glaciers, ships from California have anchored and taken on a cargo of ice. It is also a great hot and mineral spring region—medicinal springs abound in sufficient number and variety to treat the diseases of the whole race. Goreloi, one of these, is a vast smoking cauldron, eighteen miles in circumference.

*Fish.* All the early navigators and explorers from Cook to the present time, have spoken of the immense numbers of salmon, cod, herring, halibut, mullet, ulicon, etc. There are no other such fisheries in the known world. A missionary thus describes a fishing scene on the Nasse river; "I went up to their fishing grounds on the Nasse river, where some five thousand Indians had assembled. It was what is called their 'small fishing.' The salmon catch, is at another time. These small fish form a valuable article of food, and also for oil. They come up for six weeks only, and with great regularity. The Nasse, where I visited it, was about a mile and a half wide, and the fish had come up in great quantities, so great that, with three nails upon a stick, an Indian would rake in a canoe full in a short time. Five thousand Indians were gathered together from British Columbia and Alaska, decked out in their strange and fantastic costumes. Their faces were painted red and black, feathers on their heads and imitations of wild beasts on their dresses. Over the fish was an immense cloud of sea gulls, so many and so thick, as they hovered about looking for fish, the sight resembled a heavy fall of snow. Over the gulls were eagles soaring about and watching their chance. After the small fish, had come up larger fish from the ocean. There was the halibut, the cod, the porpoise and the fin-back whale. Man life, fish life, and bird life—all under intense excitement. And all that animated life was to the heathen people, a life of spirits. They paid court and worshipped the fish they were to assist in

destroying; greeting them: 'You fish! you fish! You are all chiefs, you are.' The Christian Indians had their separate camps, where they had worship morning and evening and kept the Sabbath."

*Furs.* The principal fur bearing animals of Alaska are the fox, martin, mink, beaver, otter, lynx, black bear, and wolverine. There are also the coarser furs of the reindeer, mountain sheep, goat, wolf, muskrat, and ermine. The extent of the range and quality of the furs in that extensive northern region are conducive to a very valuable fur trade, in addition to which are the seal fur fisheries, that since 1871 have yielded to the government an income of \$1,891,030. Besides the fisheries and furs are the valuable deposits of coal, copper, sulphur, petroleum and amber, with gold and silver. The gold and silver, so far, have been found only in limited quantities.

It is the great lumber region of the country. The forests of yellow cedar, white pine, hemlock and balsam fir, will supply the world when the valuable timber of Puget Sound is exhausted. It has the great mountain peak of the country—St. Elias, 19,500 feet high; and the great river of the world: the Yukon, one of the largest rivers of the world.

Alaska is naturally divided into three great divisions. The Yukon division, comprised between the Alaska mountains and the Arctic Ocean. The Aleutian district, comprising the Alaska Peninsula and the Aleutian Islands. And the Sitkan district, including all the mainland and adjacent islands south of the peninsula.

*Climate.* Each of these three great divisions has two climates, the coast climate and the interior climate; the latter being much severer than the former. The great Gulf Stream of the Pacific, known to geographers as the Japan current, strikes and divides on the western end of the Aleutian Islands. A portion flows north into Behring's Sea, so that it is a remarkable fact—ice does not flow from the Arctic Ocean southward through Behring's Straits.

The other portion sweeps southward and eastward, and makes the whole northwest coast habitable, giving to Southern Alaska, on the coast and the adjacent islands, a Winter climate milder than New York City.

The Yukon district, bordering on the Arctic Ocean, is remarkable for one thing. From three to four feet below the surface there is a subsoil of frozen earth from six to eight feet deep. This phenomenon is ascribed to the want of drainage, together with a covering of moss that shields the ground from the hot suns of the Arctic Summer, and yet, notwithstanding this ice subsoil, during the Summer months, there is a luxuriant growth of



vegetation. The great distinguishing feature of this district is the wonderful Yukon river, two thousand miles long, navigable for steamers for one thousand five hundred miles. In some places on the lower Yukon one bank is invisible from the other. A thousand miles above its mouth it is, in places, twenty miles wide, including the intervening islands. It is one of the great rivers of the world, and upon its upper waters, within the Arctic Circle is Fort Yukon, a post of the Hudson Bay Company. At this far distant post, where tidings from the outside world only reaches once a year, is a Scotch missionary. The British Church looks well after its own people. On its banks live thousands who know neither its outlet or its source, and yet, recognizing its greatness, proudly call themselves the "Men of Yukon."

*The principal settlement* is St. Paul, on Kadiak Island. But for political purposes, Sitka was made the capital of the Russian colonies in America, and as such has enjoyed a prominence that has made its name as familiar as that of Alaska itself. It has the largest foreign population and the best houses in the Territory. But times are very dull there now, and some of its citizens and trade are removing to Fort Wrangle.

Cape Prince of Wales and the Island of Alton are the extreme western points of land in the United States—in longitude 167 deg. 59 min. 12 sec.—as far west from Portland or San Francisco as the extreme eastern point of Maine is east.

*Fort Wrangle.* This village of one hundred houses is on the northwestern coast of Wrangle Island, at the mouth of the Stickine river. Owing to the extensive gold mines at Cassair, on the Stickine river, it has become the chief business centre of Alaska. The Cassair mines are employing this season about 2000 men which creates considerable trade. For this trade Wrangle is at the end of ocean and commencement of river navigation. Five ocean vessels run between Portland and Wrangle and Victoria and Wrangle, and four small river steamers run on the Stickine river between Wrangle and the Mines. The coast of Wrangle and the mouth of Stickine river was first visited by the American ship Atahualpa of Boston, in 1802, three years before Lewis and Clark descended the Columbia. The permanent population is about one hundred whites and Russians, and five hundred Indians. Besides these there is a large Winter population of miners, and a floating Indian population of from 500 to 700 more, sometimes being from 2,000 to 3,000 Indians in the place. It is on the great highway of the Indians to and from the mines, also to their hunting and fishing. This makes it a central point for the establishment of a Mission to the Indians, as parties from several large tribes are almost always in the village. And to this point the providence of God led the Presbyterian Church

for the establishment of the first American Protestant Mission in Alaska. And the first American Missionary was a woman, Mrs. D. F. McFarland, who was on the steamer with me, to take charge of the Mission.

Getting into one of the many canoes that thronged the side of the steamer upon our arrival, I was soon on shore. Mr. J. M. Vanderbilt, one of the leading citizens and friends of the Mission, being absent for some weeks, his agent very kindly gave us temporary occupancy of his house. It had a beautiful situation, overlooking the bay, the islands and the Indian portion of the village, with its dwellings, its graves, and its emblems of heathenism. On the southern sweep of the shore of the bay, stands the Indian portion of the village.

*The native races* in Alaska number about 25,000; Russians, 300 or 400; Americans and others, 500. The Indians can be divided into three great classes: the Innuits of Yukon district; the Aleutian and the Tuskis of the Sitkan district. And these again are divided into tribes, settlements, and families. These are largely in a condition of degraded superstition, and liable to all the horrible cruelties of heathenism. The old, sick, and useless are put to death with various cruelties and disgusting rites.

The Indians are again subdivided into various families, each of which have their family badge. The badges are the whale, the porpoise, the eagle, the coon, the wolf and the frog. These crests extend through different tribes, and their members have a closer relation to one another than the tribal connection. For instance, members of the same tribe may marry, but not members of the same badge. Thus, a wolf may not marry into the wolf family, but may into that of the whale.

Upon all public occasions they are seated according to their rank. This rank is distinguished by the height of a pole erected in front of their houses. The greater the chief, the higher his pole. Some of these poles are over 100 feet high. Mr. Duncan, the missionary, relates how, upon one occasion a head chief of the Nasse River Indians put up a pole higher than his rank would allow. The friends of the chief whose head he would thus step over, made fight with guns, and the over ambitious chief was shot in the arm, which led him to quickly shorten his stick.

*Their houses* are from 25 to 40 feet square, without a window, the only openings being a small door for entrance, and a hole in the roof for the escape of the smoke. The door is three or four feet above the ground level, and opens on the inside upon a broad platform, which extends around the four sides. This platform contained their rolls of blankets, bedding, and other stores. Some of the houses had a second platform inside the first, and a few steps lower. Then a few more steps down brings to the

inside square on the ground floor, which is also planked, with the exception of about four feet square in the centre, where the fire is built on the ground; some few had a small inside room, looking as if it was a portion of the cabin of a wrecked vessel. The walls, and frequently roofs, are made of cypress plank, from two to five feet wide, and two to three inches thick. These planks are made by first splitting the trees into great planks, then smoothing down the planks with a small adze.

In front of their leading houses and at their burial places are sometimes immense timbers covered with carvings. Those that attended the Centennial will remember such posts. These are the genealogical records of the family. The child usually takes the totem of the mother. For instance, at the bottom of the post may be the carving of a whale, over that a fox, a porpoise, and an eagle—signifying that the great-grandfather of the present occupant of the house, on his mother's side, belonged to the whale family, the grandfather to the fox family, the father to the porpoise, and he himself to the eagle family. These standards are from two to five feet in diameter, and often over sixty feet in height, and sometimes cost from \$1000 to \$2000. Formerly the entrance to the house was a hole through this standard, but latterly they are commencing to have regular doors hung on hinges. Among the Stickines these badge trees or totems are usually off to one side of the door.

*Alaska Canoes.* Alaska is celebrated for its canoes. Some of the largest of these canoes are from sixty to seventy-five feet long and eight to ten feet wide, and will carry one hundred people. One of these great canoes was on exhibition last year at the Centennial. The operation of making them is thus described: "Having selected a sound tree, and cut it the desired length, the outside is first shaped, then the tree is hollowed out till the shell is of proper thickness; this is done with a tool resembling a grubbing hoe or narrow adze with a short handle. It is then filled with water, which is heated by throwing in hot stones. The canoe is then covered with a canvas to keep the steam in, this softens the timber, and the sides are distended by cross-sticks to the desired breadth at the center, and tapering towards the ends in lines of beautiful symmetry. It is finished off with a highly ornamental figure-head, and the bulwarks strengthened by a fancy covering board."

*Ornaments.* Many of them paint their faces with lamp black and oil, which gives them a very repulsive appearance. They have a great variety of household utensils made from the horns of mountain sheep and goats, from ivory and from wood. Polygamy is common among the rich. Upon arriving at a marriageable age, the lower lip of the girl is pierced and a silver pin

inserted, the flat head of the pin being in the mouth and the pin projecting through the lip over the chin. Many of them, men as well of women, wear a silver ring in the nose as well as the ears. After marriage the silver pin is removed from the woman's lip, and a spool shaped plug, called labaret, about three-quarters of an inch long, is substituted in its place. As she grows older larger ones are inserted, so that an old woman may have one two inches in diameter.

*Marriage.* A man wanting a wife sends a message to that effect to the girl's relations. If he receives a favorable answer he sends them all the presents he can procure. Upon the appointed day he goes to her father's house and sits down on the door-step with his back to the house. The relations who have assembled there sing a marriage song, at the close of which furs and calico are laid across the floor and the girl is escorted over them from the corner where she has been sitting, and takes her seat by the side of the man. Then dancing, singing and eating are kept up by the guests until they are tired. In these festivities the couple take no part. After this they fast for two days, and then after a slight repast they fast for two days more. Four weeks afterward they come together and are recognized as husband and wife.

*Polygamy.* Polygamy, with all its attendant evils, is common among the Kaviaks. These wives are often sisters. Sometimes a man's own mother or daughter is among his wives. If a man's wife bears him only daughters, he continues to take other wives until he has sons. One of the Nasse chiefs is said to have had forty wives. After marriage they are practically slaves of their husbands. Their persons are at the disposal of visitors or travelers, guests of their husbands. They are sometimes, in Southern Alaska, sent to the mines, while the husband lives in idleness at home on the wages of their immorality. If ill-behaved, excessively lazy, or barren, they are sent away. Sometimes they are traded off by the husband for something he may desire. In child-birth, when needing the most tender care, they are driven out of the house as unclean, and kept for ten days in an uncomfortable hut, without attention.

When a young girl arrives at maturity she is considered unclean. Everything she comes in contact with, and even the sky she looks upon, is considered unclean. She is therefore thought to be unfit for the sun to shine upon, and is confined for a year in a hut, so small that she cannot stand upright in it. Only the girl's mother is allowed to approach her, and she only to bring her food.

Around Sitka this period has been shortened to three months. At the close of this imprisonment she is taken out, her old

clothes burned, new ones provided, and a feast given, during which a slit is cut in the under lip, parallel with the mouth, and a piece of wood or shell inserted to keep the aperture extended. In some sections all the work but hunting and fighting falls upon the women—even the boys transferring their loads and work to their sisters.

Said a great chief, "Women are made to labor. One of them can haul as much as two men. They pitch our tents, make and mend our clothing," etc.

*Slaves.* And, as if their ordinary condition was not bad enough, the majority of the slaves are women. The men captured in war are usually killed, or reserved for torture; but the women are kept as beasts of burden, and often treated with great inhumanity. The master's power over them is unlimited. He can torture or put them to neath at will. Sometimes, upon the death of the master, one or more of them are put to death, that he may have some one to wait upon him in the next world.

*Burials.* Between the houses and the higher land back of them are a number of boxes about five feet by two in size, raised on four posts a few feet from the ground. Also small frame houses like an old fashioned smoke house four feet square. These are the graves of the chiefs and Shaman's (sorcerers). One of them was surmounted by a wooden figure of a whale ten feet long, another had a figure of an immense frog. Others had the genealogy of the dead painted upon them.

The bodies of the dead are disjointed and burned. The funeral ceremonies of the wealthy often last four days. Dead slaves are cast into the sea. They believe in the transmigration of souls from one body to another, but not to animals. And the wish is often expressed that in the next change, they may be born into this or that powerful family. Those whose bodies are burned are supposed to be warm in the next world, and the others cold. If slaves are sacrificed at their burial it relieves their owners from work in the next world.

Their food consists largely of berries and fish. Large quantities of salmon are smoked and put away for future use. They also prepare large quantities of fish oil. Some years ago a party of them having seen the cooks on ship mix up flour and bake it into bread—got possession of a barrel of lime from a shipwrecked vessel. A portion of this was mixed up as they had seen the cook do, and baked and boiled, and boiled and baked, but to their great disgust nothing eatable came from it.

*Widow-burning.* Among the Nehaunes and Talcolins, when a man dies, his widow is compelled to ascend the burning funeral pile, throw herself upon the body, and remain there until the hair is burned from her head, and she is almost suffocated. She

is then allowed to stagger from the pile, but must frequently thrust her hand through the flames and place it upon his bosom, to show her continued devotion. Finally the ashes are gathered up and placed in a little sack, which the widow carries on her person for two years. During this period of mourning she is clothed in rags, and treated as a slave.

*Murder of the Old and Feeble.* Among the Chuckees the old and feeble are sometimes destroyed. This is done by placing a rope around the neck, and dragging them over the stones. If this does not kill, then the body is stoned, or speared, and left to be eaten by the dogs. Occasionally the old ask to be killed. Then they are taken, stupefied with drugs, and, in the midst of various incantations, bled to death.

*Women denied burial.* Among the Tuski and many of the Orarian tribes the bodies of good men are burned, and the ashes carefully preserved. But in some sections, where wood is scarce, the bodies of women are not considered worth the wood that would be consumed in the burning, and they are either cast out, to be consumed by the dogs, foxes and crows, or cast into the sea as food for the fishes.

A summary cure for crying babies is to take them to the sea shore and hold them in the water until they cease crying. As soon as they can walk, children are bathed in the sea daily, and they learn to swim about as soon as they do to walk. Festivals are given on erecting a new house, naming of children, marriages, deaths, etc. These festivals consist of dancing, singing, and feasting. Some of them are so expensive as to impoverish a whole circle of relatives.

*Shamans.* Sorcery seems universal among all uncivilized people, prevailing alike in Asia, Africa, America, and the islands of the sea. The words and actions of the Shaman are considered infallible. The office is often hereditary, the son inheriting from the father the various paraphernalia of drum, rattles, masks, charms, etc. The young man that would become a Shaman, according to Dall, secludes himself for a time in the woods, living on roots. He then claims that a master spirit sends an otter to him, which he kills. The skin of the otter becomes his badge of office, the tongue is placed in a bag prepared for the purpose, and carefully concealed as a charm, for was an uninitiated person to look upon it, they would immediately lose their senses. If solitude and low diet does not bring power, the young Shaman spends a night at the grave of an old Shaman, taking a tooth or finger from the corpse and holding it in his mouth to more readily compel the attendance of the spirits. The honor of the Shaman depends upon the number of spirits he can control. He has a separate mask, songs and dances for each. His hair is never to be cut.

From Dall we also receive the following specimen performance: "On the day appointed for the exhibition of his power, his relations, who act the part of a chorus of singers, are obliged not only to fast, but also use a feather as an emetic, to free themselves entirely from food. The performance commences at sunset and lasts until sunrise. All who wish to participate assemble in the lodge of the Shaman, where they join in a song, to which time is beaten on a drum. Dressed in his paraphernalia, with a mask over his face, the Shaman rushes round and round the fire which is burning in the centre of the lodge. He keeps his eyes directed toward the opening on the roof, and keeps time to the drum with violent motions of his limbs and body. These movements gradually become more convulsive; his eyes roll until the whites alone are visible. Suddenly he stops, looks intently at the drum and utters loud cries. The singing ceases and all ears are strained to catch the utterances which are supposed to be inspired. By changing the masks he places himself en rapport with the spirit to which each mask is dedicated. It is believed that this spirit inspires for a moment all the utterances which are supposed to be inspired."

When a Shaman dies his body is left for a day in each of the four corners of his room; on the fifth day it is carried out, dressed in the costume of his order, and deposited in one of the small burial houses spoken of previously. His body is not burned.

*Cannibals.* The Indians are held in abject fear of the conjurers or medicine men. Some of the scenes to be constantly witnessed on that coast are thus depicted by Mr. Duncan of the Church Missionary Society, British Columbia: "The other day we were called upon to witness a terrible scene. An old chief, in cold blood, ordered a slave to be dragged to the beach, murdered and thrown into the water. His orders were quickly obeyed. The victim was a poor woman. Two or three reasons were assigned for this foul act. One is that it is to take away the disgrace attached to his daughter who has been suffering for some time with a ball wound in the arm. Another report is that he does not expect his daughter to recover, so he has killed this slave in order that she may prepare for the coming of his daughter into the unseen world. I did not see the murder, but immediately after saw crowds of people running out of the houses near to where the corpse was thrown and forming themselves into groups at a good distance away, from fear of what was to follow. Presently two bands of furious wretches appeared, each headed by a man in a state of nudity. They gave vent to the most unearthly sounds, and the naked men made themselves look as unearthly as possible, proceeding in a creeping kind of stoop,

and stepping like two proud horses, at the same time shooting forward each arm alternately, which they held out at full length for a little time in the most defiant manner. Besides this, the continual jerking of their heads back, causing their long black hair to twist about, added much to their savage appearance. For some time they pretended to be seeking for the body, and the instant they came where it lay they commenced screaming and rushing around it like so many angry wolves. Finally they seized it, dragged it out of the water and laid it on the beach, where they commenced tearing it to pieces with their teeth. The two bands of men immediately surrounded them and so hid their horrid work. In a few minutes the crowd broke again, when each of the naked cannibals appeared with half of the body in his hands. Separating a few yards they commenced, amid horrid yells, their still more horrid feast of eating the raw dead body. The two bands of men belonged to that class called 'medicine men.'

"I may mention that each party has some characteristic peculiar to itself; but in a more general sense their divisions are but three, viz: those who eat human bodies, the dog eaters, and those who have no custom of the kind. Early in the morning the pupils would be out on the beach, or on the rocks in a state of nudity. Each had a place in front of his own tribe; nor did intense cold interfere in the slightest degree. After the poor creature had crept about, jerking his head and screaming for some time, a party of men would rush out, and after surrounding him, would commence singing. The dog-eating party occasionally carried a dead dog to their pupil, who forthwith commenced to tear it in the most doglike manner. The party of attendants kept up a low growling noise, or a whoop, which was seconded by a screeching noise made from an instrument, which they believe to be the abode of a spirit. In a little time the naked youth would start up again and proceed a few more yards in a crouching posture, with his arms pushed out behind him, and tossing his flowing black hair. All the while he is earnestly watched by the group about him, and when he pleases to sit down, they again surround him, and commence singing. This kind of thing goes on, with several different additions, for some time. Before the prodigy finally retires, he takes a run into every house belonging to his tribe, and is followed by his train. When this is done in some cases he has a ramble on the tops of the same houses, during which he is anxiously watched by his attendants, as if they expected his flight. By and by he condescends to come down, and then they follow him to his den which is marked by a rope made of red bark being hung over the doorway so as prevent any person from ignorantly violating



its precincts. None are allowed to enter that house but those connected with the art; all I know, therefore, of their further proceedings is, that they keep up a furious hammering, singing, and screeching for hours during the day.

Of all these parties, none are so much dreaded as the cannibals. One morning I was called to witness a stir in the camp which had been caused by this set. When I reached the gallery I saw hundreds of Tsimshians sitting in their canoes, which they had just pushed away from the beach. I was told that the cannibal party was in search of a body to devour, and if they failed to find a dead one, it was probable that they would seize the first living one that came in their way; so that all the people living near to the cannibals' house had taken to their canoes to escape being torn to pieces. It is the custom among these Indians to burn their dead; but I suppose for these occasions they take care to deposit a corpse somewhere in order to satisfy these inhuman wretches.

"These, then, are some of the things and scenes which occur in the day during the winter months, while the nights are taken up with amusements, singing and dancing. Occasionally the medicine parties invite people to their several houses, and exhibit tricks before them of various kinds. Some of the actors appear as bears, while others wear masks, the parts of which are moved by strings. The great feature in their proceedings is to pretend to murder, and then to restore to life, and so forth. The cannibal, on such occasions, is generally supplied with two, three or four human bodies, which he tears to pieces before his audience. Several persons, either from bravado or as a charm, present their arms for him to bite. I have seen several whom he has thus bitten, and I hear two have died from the effects."

## ANTIQUITY OF THE TOBACCO-PIPE IN EUROPE.

BY EDWIN A. BARBER.

## PART II.—SWITZERLAND.

In the museum of the Antiquarian Society of Zürich, Switzerland, are three ancient pipes, analogous to the "Elfin pipes" of Great Britain. Baron de Bonstetten, in the *Recueil des Antiquités Suisses*, has figured and described several of these objects, among which are a gold medallion with the figure of a centaur, holding in his mouth an implement in the form of a pipe, and a terra-cotta figure representing a hand grasping a hollow cylinder or cone. I am inclined, however, to agree with Dr. Ferdinand Keller, in his belief that the former has not been correctly described, and that the figure of the centaur was not intended to be represented with a *pipe* in its mouth. It is doubtful also that the *latter* was designed for a pipe, "and if so, it undoubtedly belongs to a much more recent period" than that assigned to it by M. de Bonstetten. In reply to some inquiries regarding the ancient pipes of Switzerland, Dr. Keller writes me: "Concerning the discovery of Rhaetian or Celtic antiquities at Burwein, it is certainly true that at this village, which lies near to the village of Conters, on the road from Chur to Engadin, in the Canton of Graubünden (Grisson), a countryman, in the year 1786, discovered, near the public road, two copper kettles, one within the other. The inner one contained gold and silver armlets of various sizes, a few gold and many silver coins, dies, a sort of spectacles of twisted wire with a small opening in the center; also *small pipes*, and lastly objects supposed to be tools—Roman augers. There were also found with these, bracelets of gold, representing snakes, a small silver kettle, and a censer with silver chains. . . . . The coins which were discovered here are undoubtedly Etruscan. We have described them in the 7th volume, number 8, of the proceedings of our Antiquarian Society. The other objects of this discovery belong, without doubt, to a date previous to the Christian era, and may be either Etruscan or Celtic. We suppose that the bronze and iron pipes found here, and which are still frequently being brought to light, are ancient. If this were certain, those antiquaries are right who affirm that in the times of the Romans such pipes were not used for smoking, but served for burning incense on festive occasions."

"The three pipes in our collection, as you see, resemble those which are found in England, and which are there called 'Elfin'

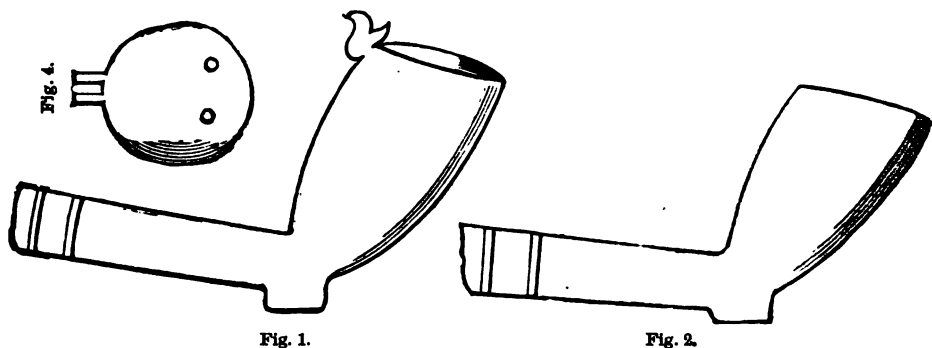


Fig. 1.

Fig. 2.

or 'Fairy pipes.' Concerning the age of these, antiquarians differ. Some hold that they are of Roman fabrication, relying upon the circumstance that they have sometimes actually been found in the ruins of Roman abodes. Others, to which class I belong, consider them the productions of the 16th or 17th century, and recognize in them the first pipes which were used after the introduction of tobacco into Europe. The three pipes in our collection have all been found in the Canton of Zürich, and are made of thick plates of iron, curled into shape and soldered together with copper. . . . . No. 3 of the Zürich pipes, like No. 7 of the pipes of Quiguerez, has an arched cap with two perforations. See fig. 4. Although, as you see, such pipes are frequently found with us, they have not, as in England, peculiar names among the common people. I am of the opinion that they are the same that were made in the 16th or 17th century, and which are sometimes turned up accidentally with Roman relics. Such pipes are found in Switzerland in many public and private collections." In another letter, the accomplished explorer of the *palafittes* remarks, "In the pile-buildings we find no indications that point to the custom of tobacco-smoking."

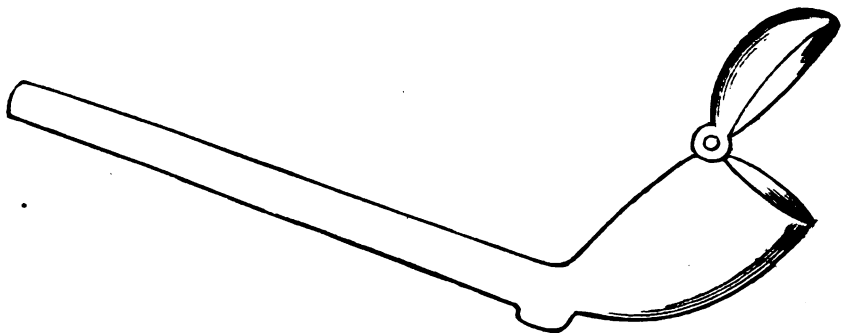


Fig. 3.

In an account of the primitive forges in the Bernese Jura, published by M. A. Quigueres,<sup>20</sup> pipes are alluded to, among other antiquities, "qu'on a cru inconnues dans l'antiquité, mais qui se trouvent trop nombreuses dans les habitations gallo-romaines, pour pouvoir actuellement en nier l'existence ou l'emploi dans ces temps reculés." He continues, "There are many of them in the museum of Avenches, in that of Porrentruy, and at Montbéliard. We have found three of them, with

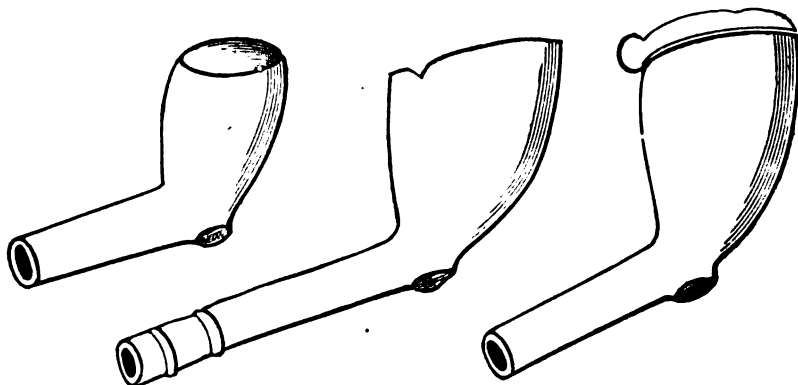


Fig. 5.

Fig. 6.

Fig. 7.

## PIPES OF QUIGUREZ.

some very characteristic objects. They are all of iron, very small, and exactly of the form of our gypsum pipes. . . . One still has its lid. The same form was employed at the commencement of the 17th century, as we have proof in exhuming the body of a Swiss guard, burned in 1637. But pipes of that time were of terra-cotta. Fig. 5 came from a Roman or Gallic-Roman military post, near the walls of Liesberg, at a distance of some hundred feet from the site of a forge. "Fig. 6 was found at Delémont, with some Gallic-Roman *debris*, and fig. 7 at Develier, with some beautiful fragments of vases made of bole, in the Roman ruins.

M. Quigueres believes that "These objects show that the Gallic or Helvetian people smoked before the arrival of the Romans, using probably aromatic herbs, like the wild-thyme, and perhaps also the hartstongue and hemp. If these pipes do not come particularly from the primitive forges, they belong to the first age of iron. It is desirable that further investigations be made in regard to their origin, for because the Roman authors do not speak of them, that is no proof that certain peoples of antiquity did not make use of the pipe as well as those of America."

<sup>20</sup> Vide *Transactions of the Soc. of Antiquaries, Zürich, 1871, vol. XVII, p. 86.*

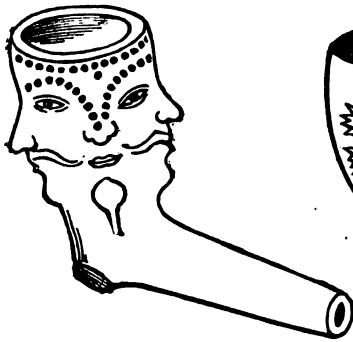


Fig. 8.

FROM THE JURA.



Fig. 9.

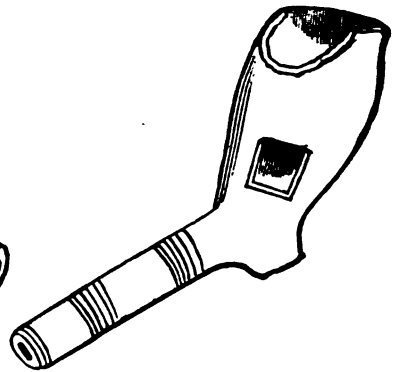


Fig. 10.

FROM THE COLLECTION OF M. MURET.

Says Dr. Wilson,<sup>21</sup> "Pliny has been produced to show that Coltsfoot furnished a substitute for the American plant which superseded this and other fancied supplies of the ancients' pipes. Speaking of that plant as a remedy for a cough (Nat. Hist. XXVI, 16). Pliny says: 'Hujus aridæ cum radice fumus per arundinem, haustus et devoratus, veterem sanare dicitur tussim; sed in singulos haustus passum gustandum est.' This, however, is nothing more than a proof of the antiquity of a process of applying the fumes or steam of certain plants, for medicinal purposes, which is recommended in a treatise on 'The Vertues of Colefoot' in the *Historie of Plantes*, by Rembert Dodoens, translated and published in England in 1578. 'The parfume of the dryed leaves,' says he, 'layde upon quick coles, taken into the mouth through the pipe of a funnell, or tunnell, helpeth such as are troubled with the shortness of winde, and fetche their breath thicke and often.'" In olden times housewives were in the habit of administering the vapor of various herbs to the sick, and, in some cases, the fumes were inhaled through *the spout of a tea-pot*.

"Potters' names or marks," observes Dr. Keller, "are not usually given on clay pipes, yet I recollect having noticed on a few such pipes two Roman letters, but what they were, I do not remember." These were stamped on the flat heels, as was done in the earlier British clay pipes. "In my opinion," he concludes, "all iron pipes originated in the 16th or 17th century, in Holland, from whence smoking spread over the rest of the Continent."

Figs. 8-9 represent two iron pipes from the Jura (Kanton Bern), by A. Quiguerez. The original of fig. 10 is in the collection of M. Muret, Conservateur aux Médailles, Paris. The material is bronze, and on one of the sides of the bowl can be

<sup>21</sup> Vide *Pipes and Tobacco*, or Notes on the Narcotic Usages of the Old and New World. By Daniel Wilson, LL. D. Toronto, 1857.

seen a little quadrangular opening. Fig. 11 is supposed to be an Etruscan pipe, in beautiful patina, from the collection Campana. Figs. 12-13 are two views of a bronze pipe found in the year 1858 in a forest near Biel, Canton Berne. The plates of bronze at *a a a* are joined together with silver seams. Pipe

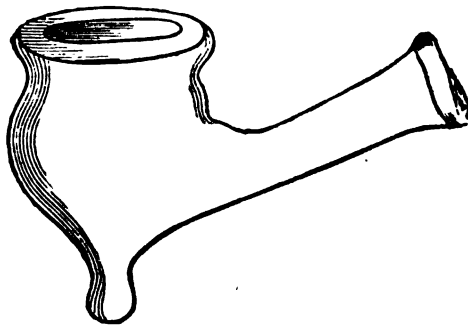
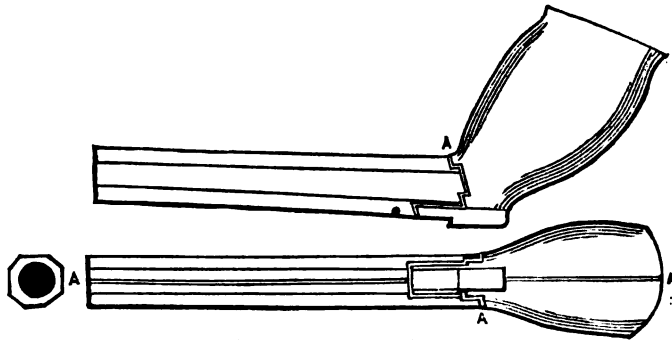


Fig. 11.—FROM THE CAMPANA COLLECTION.

No. 14 is now in the collection of the Davenport (Iowa) Academy of Natural Sciences. Mr. W. H. Pratt, who has kindly furnished me with a sketch, describes it as a sheet iron pipe which was given him by a pupil several years ago, who belonged to a Dutch family residing in the neighborhood. The illustration is of the actual size, and there can be no doubt that the



Figs. 12-13.—CANTON BERN.

original is one of the earlier Dutch productions which has found its way to the United States, and which bears a striking resemblance to some of the ancient forms figured above.

A copper or bronze pipe (fig. 15), found in a field in Montour county, Pa., is owned by Mr. J. M. M. Gerner, of Muncy, Pa. It is not certain whether it is a purely aboriginal production, or whether it was brought from Europe and traded to the natives a century or so ago. The form is unusual, though somewhat similar specimens have been brought to light on the eastern continent.

After a careful review of the foregoing facts, we arrive at the conclusion that we have no positive proof that pipes were in use in Europe before the Columbian discovery of America; but if it can be shown that such was undoubtedly the case, it is

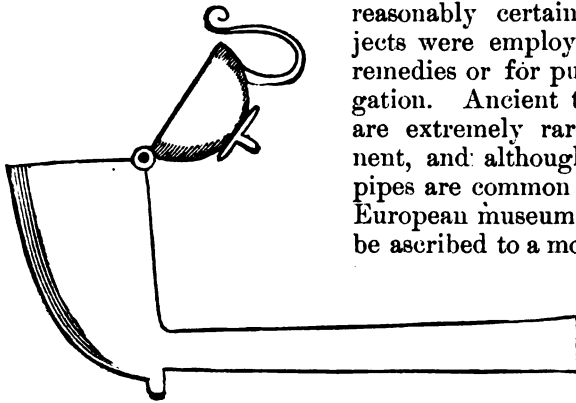


Fig. 14.—DUTCH PIPE—DAVENPORT MUSEUM.

reasonably certain that such objects were employed in medicinal remedies or for purposes of fumigation. Ancient terra-cotta pipes are extremely rare on the continent, and although antique metal pipes are common in some of the European museums, the latter must be ascribed to a more recent period than the early clay pipes of Great Britain.

N. B.—Since my paper on the ancient pipes of Great Britain appeared in the last number of the *ANTIQUARIAN*, Mr. S. L. Frey, of Palatine Bridge, N. Y., has written me that he has recently found a number of English clay pipes in Indian graves. Amongst these were two specimens with the initials R. T. stamped in the bowls, which were doubtless the same as those found in an Indian grave in Pennsylvania, and described in the preceding paper. Other examples had the initials E. B. stamped on the flat heels, as in the earliest pipes of Great Britain and those mentioned by Dr. Keller. Another was marked with the letter S, while still another has a very rude representation of a man on horseback, "possibly," as Mr. Frey remarks, "intended to represent St. George and the dragon." In one of these graves was found a very interesting early Fulham jug. All of these articles had been obtained by the Indians from the early settlers in New York and the New England states.

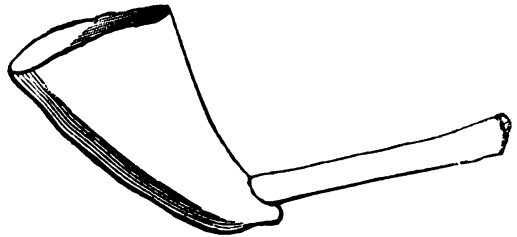


Fig. 15.—COPPER PIPE—GERNERD COLLECTION.

FORT WAYNE, OLD FORT MIAMI, AND THE ROUTE  
FROM THE MAUMEE TO THE WABASH.

BY R. S. ROBERTSON.

The early history of the country is a subject attracting the attention of many intelligent minds, and now that many county histories are being prepared, it is but right that any whose investigations have enabled them to throw any light upon the early history of any locality should furnish it, that the work undertaken may be as complete as it is possible to make it. It is with this view, and with the hope that it may induce others to contribute to the work, that I contribute my mite, in the following hasty sketch from notes made at different times for my own use.

The importance of maps in deciding important questions in history is often overlooked, but they are frequently the only records of early explorations. It is from an early map that we can prove that the site of Fort Wayne was known at an earlier date than any recorded history has given.

In 1657 Sanson, who was Royal Geographer to the king of France, prepared a map of "Le Canada, ou Nouvelle France," on which Lake Erie is displayed, with a river flowing into it from a distance, clearly representing the present course of the Maumee from the site of Fort Wayne to the lake. The St. Marys and St. Joseph are not delineated, showing that their courses had not yet been explored. Thus we have quite conclusive evidence, that the Maumee had been explored to the vicinity of this point prior to 1657, by the indefatigable French explorers.

The map is in the possession of C. C. Baldwin, Esq., of Cleveland, and a reduced copy is given in the *AMERICAN ANTIQUARIAN*, vol. 1, p. 233.

Again, in 1680 the route to the Mississippi by way of the Maumee and Wabash is clearly alluded to by Pere Allouez, who says: "There is, at the end of Lake Erie, ten leagues below the strait, a river, by which we can traverse much of the road to the Illinois, being navigable to canoes, about two leagues nearer to that by which they usually go there (by the St. Joseph of the lake and Kankakee?)—*Letter of Pere Allouez, on the 9th of November, 1680, translated from Margry, 3, p. 98.*

In 1681 the great LaSalle, before starting on his second expedition towards the Mississippi, made his will, in which is the following devise: "Do give, cede and transfer to the said Sieur



Pliet, in case of my death. \* \* \* As well as all my rights over the country of the Miamis, Illinois, and others to the southward, with the settlements among the Miamis, in the state it may be at the time of my death."—*Will of La Salle, Aug. 11, 1681. Translated from Margry's French Discoveries.*

We find another mention in 1682, from the pen of La Salle, in a letter, which says: "The 15th of January we struck the trail of those of our people whom M. de Tonty had sent on a hunting expedition. They were searched for and one was found. The two others were gone to make enquiries after me to the river of the Miamis."—*Translated from Margry, in Magazine of American History, 2, 544.*

In *Western Annals*, p. 81, it is stated that in a report of La Salle to Frontenac, made in 1682, he mentions the route by the Maumee and Wabash to the Mississippi as the most direct. Notwithstanding it was the shortest route, the explorers long continued to go around by the lakes, sometimes descending by Green Bay and the Fox and Illinois rivers, or by the head of Lake Michigan up the St. Joseph of the Lake to the present site of South Bend, thence by Portage to the Kankakee and down that river. Why they should so long travel this roundabout way has been a mystery until lately, when another unpublished letter of LaSalle threw a flood of light upon it. It is well known that about the time of the advent of the whites, the Iroquois confederacy was carrying on a war of extermination against the Algonquin tribes, of which the Miamis were a part. LaSalle says: "Because I can no longer go to the Illinois but by the lakes Huron and Illinois, the other ways which I have discovered by the head of Lake Erie, and by the western coast of the same, becoming too dangerous by frequent encounters with the Iroquois."—*Letter of LaSalle, October, 1682. Translated from Margry, 2, 296.*

This letter is important also, because it shows that LaSalle actually discovered the route, and that he has stood where now a populous city stands, when there was nothing to meet his view but the unbroken forest and the small cluster of Indian wigwams. We may consider this disputed question proven, for La Salle was noted for stating nothing but exact facts, and when he says "I have discovered the route," it may be taken as a fact.

From 1682 to 1716, a period of 34 years, my researches have led me to no direct mention of this route, but it is stated that a route was established about 1716 from the head of Lake Erie up the Maumee to the site of Fort Wayne; thence by a portage to the Wabash; thence by way of that river to the Ohio and Mississippi—but the authority for the statement is unfortunately not given.—*Western Annals, p. 80.*

Little more is known of events here until near the middle of the eighteenth century. There is a map in Colden's History of the Five Nations, showing a portage from the St. Marys to the "Oubache"—one from our St. Joseph to the "Huakiki," (Kankakee), and one from the Kankakee to the St. Joseph of Lake Michigan.—*Colden's Hist. of the Five Nations*, ed. 1847.

Parkman says: "At the middle of the eighteenth century, her great object," speaking of France, "was fast advancing towards completion. Two posts on the Wabash and one on the Maumee made France the mistress of the great trading highway from Lake Erie to the Ohio."—*Consp. of Pontiac*, 1. 62.

History and tradition inform us that a French fort was destroyed here in 1747. If this be true, it must have been soon re-established, for in 1749 Capt. Bienville de Celeron, a chevalier of the order of St. Louis, was sent by the Governor of Canada, the Marquis de Galissoniere, with orders to descend the Ohio and take possession of the country in the name of the king. He descended the Ohio to the mouth of the Great Miami, burying leaden inscribed plates at various points in his route; thence up the Miami to about Fort Laramie; thence across the portage to the head of the Maumee. "They completed the portage on the 22nd of September and arrived at Kiskakon. This appears to be the Indian name for the site of Fort Wayne. Celeron found it a French post, under the command of M. de Raymond. It undoubtedly took the name of Kiskakon from a tribe of Ottawas that removed to this place from Missillimackinac, where they had resided as late as 1681. It was here that Celeron provided pirogues and provisions for the descent of the Maumee to Lake Erie. The Miami chief Pied Froid, or Cold Foot, resided in the village. He appears not to have been very constant in his allegiance, either to the French or the English. Leaving Kiskakon on the 27th of September, part of the expedition went overland to Detroit, and the remainder descended the river by canoe."—*Mag. of Am. History*, 2, 130-147.

A map of his route, prepared by Father Bonnecamp, who accompanied the expedition, shows with considerable exactness the course of the St. Marys and Maumee, and the "Fort" is located in the bend of the St. Marys south and east of the river. If the Map is correct and we have no reason to doubt it, the fort stood somewhere not far from the residence of Hon. Hugh McCulloch, which agrees with existing traditions. Vaudreuil mentions Fort Miami on the Maumee in 1751. This must have been our Fort Miami, for although there were four forts of that name in the west, the other Fort Miami on the Maumee was not built until early in 1794, and then by the British. One of the four was at the junction of the St. Joseph and St. Marys, the

second at the mouth of the St. Joseph of Lake Michigan, the third on the Illinois river, and the fourth at the foot of the Maumee rapids.—*Western Annals*, 82 and note.

It may be interesting to note that in 1753, Maj. Geo. Washington accompanied his report to Gov. Dinwiddie of his mission to the French at Fort Duquesne, with a map of the western country, which indicates that if he could not himself "tell a lie" he could prepare maps that were a good ways from the truth. On it a mountain range, marked as running from N. E. to S. W. lies in the peninsula forming the present State of Michigan. On the east side of the range the "Miamis river," a very short stream, flows directly east into Lake Erie, while the "Obaysh," (Wabash) or St. Jerome, river rises on the west side of the same mountain range, near where the city of Jackson now stands, flowing only a little west of south to the Ohio.

In 1758 this route was described by DuPratz; He says: "From the Missouri to the Oubache (the Ohio) is a hundred leagues. It is by this river that one goes to Canada from New Orleans to Quebec. This voyage is made by going up the river (Mississippi) to the Oubache (Ohio), then they go up this river to the river of the Miamis (the Wabash), continue this route to the portage, and when they reach this place seek natives of this nation, who make the portage in the space of two leagues. This road completed they find a small river which flows into Lake Erie."—*Translated from DuPratz Da Louisiane*, 1,147, and the accompanying map gives the route and portage as above described.

The French were then in peaceable possession of all the west but their domination soon came to an end. Most of the western posts were transferred to the English in 1760. It was on the 29th of November, 1760, that Detroit fell into hands of the English, and soon after an officer was sent southward to take possession of the Fort Miami (now Fort Wayne), and Ouatonon, which guarded the communication between Lake Erie and the Ohio.—*Parkman, Consp. of Pontiac*, 156 and 169.

This was undoubtedly Ensign Holmes, with a detachment of 60th rifles, or "Royal Americans." Not more than 600 or 800 men of this regiment garrisoned all the forts of the west. A full history of this regiment would be a history of the country west of the Alleghenies, from this time until the revolutionary period, but, unfortunately, no such history is known to exist.

The 60th Rifles, or Royal Americans, was a regiment organized in 1755, under the direction of the Duke of Cumberland, expressly for American service. It was to consist of four battalions of 1000 each, to be raised from among the German and Swiss emigrants; £81,178 was voted by parliament to raise it.

German and Swiss officers were to be provided, and an act of parliament was passed to authorize them to be commissioned. Its ranks at this time were filled by provincials of English as well as of German descent. Henry Boquet was a Swiss, of the Canton of Berne, and was a soldier from boyhood, serving under the king of Sardinia, and afterwards that of Holland. He accepted a Lieut.-Col.'s commission in the regiment in 1755, and was Col. of the 1st Battalion at this period. He was made a Brig.-Gen'l in 1765. The regiment was honored with the post of danger in all the Indian wars along the very extended frontier. One of its battalions was defending Fort George on the Lake of that name and was nearly annihilated by the massacre so vividly described by Cooper in the *Last of the Mohicans*, when they had surrendered to Montcalm. Another guarded the Pennsylvania frontier, and the rest were scattered among all the forts of the great west, exposed to all the horrors of Pontiac's bloody wars. A namesake of the writer, Capt. Robertson, was captured by the Indians near Detroit, put to death, and the skin of one of his arms used for a tobacco pouch.—*Parkman, Consp. of Pontiac*, 230; *Smollet's England*, 3475.

In 1763, according to Sir William Johnson, the Miamis had about 800 fighting men, but this included a portion of their allies, the Kickapoos. Parkman says of them at this period: "On the water of the Wabash and Maumee dwelt the Miamis, who, less exposed, from their position, to the poison of the whisky keg, and the example of debauched traders, retained their ancient character and customs in greater purity than their eastern neighbors."—*Consp. of Pontiac*, 1,151.

He says—"From Vincennes, one might paddle his canoe northwards up the Wabash until he reached the little wooden post of Ouatonon, thence a path through the woods led to the banks of the Maumee. Two or three Canadians or half-breeds, of whom there were numbers about the Fort, would carry the canoe on their shoulders; or, for a bottle of whisky, a few Miami Indians might be bribed to undertake the task. On the Maumee, at the end of the path, stood Fort Miami, near the spot where Fort Wayne was afterwards built.—*Ib.*, 156.

## HOW THE RABBIT KILLED THE (MALE) WINTER.

AN OMAHA FABLE. BY J. O. DORSEY.

The Rabbit went somewhere. He arrived at the place where the Winter was. "Well, you have not been coming at all (or, your custom in the past has been not to come hither at all) to this place (not your home). Sit by those things near you. What is the great matter with you, you who have been walking?" said the Winter.

"Yes, my uncle, my aunt, too, my grandmother having altogether beaten the life out of me, I have been coming hither in a bad humor."

The Rabbit continued crying; he continued hopping to and fro; he did not sit motionless at all. "Sit still," said the Winter.

"No, uncle, I always do thus." And it came to pass that the Winter spoke of going out hunting. "My uncle, I will go to the place where you will be," said the Rabbit. "What, you would die," said the Winter. "No, uncle, how can you possibly think that I would die? At any rate I am going thither." "Let us see; so do," said the Winter. The Winter went out; and when he had said, "Wh! wh!" he made a fine driving snow-storm. It was very cold. And when he went, the Rabbit accompanied him. The Rabbit was very active; he ran very far in front (of the Winter), and then came back again; he ran around the Winter while he was moving along. "The person in motion is indeed active," thought the Winter. And it came to pass that he (the Rabbit) scared up a deer. "Oho, uncle, there comes a deer to the place where you are. Shoot him," said the Rabbit. "No, indeed, I do not hunt such things," said the Winter. And then the Rabbit thought, "What can he be hunting?" And it came to pass that the Rabbit, while moving found some men.

"Oho, uncle, some men have come to that place where you are."

"Yes, such I am used to hunting," said the Winter. And then the Winter killed them. And he carried the bodies to his home. When he reached home he boiled the men ("who had been alive").

"Hurry for your nephew, I think he is very hungry indeed," said the Winter (speaking to his wife, who was cooking). It was cooked. A dish he filled for him (the Rabbit) with the human fresh meat.

"I am not used to eating such (food)," said the Rabbit. He gave it back to them. When the supply of provisions had been

eaten the Winter spoke of going out hunting again. "Let us go, Rabbit," said the Winter. "No, uncle. Do you go alone," said the Rabbit. The Winter, having made it cold again, went out. When he had gone, the Rabbit questioned his wife. "My aunt, what does my uncle fear (when he sees it)?" "Your uncle has nothing to fear." "No, aunt, even I have something to fear (when I see it). It is impossible for my uncle to have nothing to fear." "Your uncle has nothing to fear," said the woman. "No, aunt, even I am frightened from time to time. It is impossible for my uncle to have nothing to fear." "Your uncle fears the head of a Rocky Mountain sheep." "Yes, I thought so," said the Rabbit. Having found one, he killed it. He cut off the head with a knife, and carried it homeward on his back. The Winter reached home. "In which direction went the Rabbit?" "He has just gone out," said the woman. And it came to pass that the Rabbit reached home at dusk. "Uncle, that round thing by you is the head of a Rocky Mountain sheep," he said. When he had thrown it suddenly towards him, the Winter became altogether dead. Only the woman remained. Therefore, from that time it has not been very cold.

Ma-schiñ'-ge "in'-a-má dhé a-ma-má. E'-gi-dhe U-sní dhin-kě'-di a-hí-bi a-má. A-hau': dha-ti-a-zhí'-khti nan dhan'-shtí. Shé-gě'-di gdhin' ga. E-añ'-khti man-shnin' dhá-dhin-shé a, á-bi a-má U-sní a-ká. An'-han, ne-gí-ha, wi-'tí-mi mé-gan, wi-kan' a-ká an'-á-khdhí-khti-an'-i\* e-gan' wa-zhin'-shte "pí a-dhin-hé há. Gha-gé gdhin'-bi a-má, ma-schiñ'-ge "in' a-ká; u-an'-si dhan'-dhan gdhin'-bi a-má; shkan'-á-zhí shtě-wan' gdhin'-ba-zhí-bi a-má, ma-schiñ'-ge-"in' a-ká.

Ma-'shciñ'-ge-in' a-má	dhé a-má-ma.	E'-gi-dhe
Rabbit the (moving, past time)	go- ing was it is said.	And it came to pass that
U-'sní	dhiñ-kě'	di a-hí
Winter,	the (he who, the one sitting)	at he arrived
dha-ti	á-zhí'-khti-nan'	dhan'-shti
you come (hither; not your home)	not very habitually;	did (past sign)
gě'-di gdhin'-gá	e-añ'-khti	man-'shnin' dha'-dhin-she' a
the (plur.) by	sit.	What is the matter, very
á-bi a-má. U'sní a-ká.	An'-han ne-gí-ha	wi-'tí-mi mé-gañ
Said it is said	Winter the.	Yes, uncle, my aunt, likewise
wi-'kañ a-ká	añ'-khdhí-khti-ani	é-gan wa-zhin'-shte
my grandmother, the me killed by striking very indeed	so (having)	in a bad humor
'pí	a-dhin-hé ha.	Gha-gé gdhin' bi a-má ma-schiñ-
I come (not my home)	I who in motion	crying he sat it is said rabbit
ge-iñ a-ká u-añ'-si dhan'-dhan gdhin' bi-amá shkan' a-zhi shtě-wan		
the	hopping again and again	he sat it is said moving not at all

\*An-a-khdhí-khti-an-i, an-i, pronounced as one syllable, "ine."

gdhin' ba-zhi bi a-má ma-schiñ'-ge-in' a-ká Shkan-a-zhi é-gan  
 he sat not it is said rabbit the moving not so  
 gdhin' ga ha' á-bi-a-má U'-sní a-ká Añ-ka-zhi ne-gí-ha dhé  
 sat said it is said Winter the. No, uncle, this  
 é-gi-man shan'-shan. E'-gi-dhe U'-sní a-ká á-ba-e a-dhé  
 so do I always. And it came to pass that Winter the to hunt go'  
 'i-dhá bi amá. Ne-gí-ha shu-bdhé tá miñ-ke á bi a-ma ma-schiñ'-  
 he spoke of it is said. Uncle, with you I go will I who said it is said rab-  
 ge-in' aka'. Tě-na! dha-té te ha. a'-bi-a-ma' U'-sní a-ka' Añ-ka-  
 bit the. What! you die will said, it is said, Winter the no  
 zhi-ha' ne-gí-ha a'-khtan a-té ta'-dan shan' shu-bdhe' ta'  
 indeed, uncle, how possibly I die shall? At any rate with you I go will  
 miñ-ke ha' Iin-da-ké! é-gaň gá ha' a'-bi-a-ma' U'-sní a-ka'  
 I who Let us see! so do said, it is said Winter the  
 U'-sní a-ka' a'-shi a-dha'-b e-gan' wh! wh! a'-bi-a-ma' 'kí  
 Winter the out he went, it is said, sh (having) wh! wh! he said, it is said, when  
 i-ga-shú-de ga-gha'- bi a-ma' u'-sní hě'ga-zhi a-ma', Kí a-dha'-  
 fine driving snow he made, it is said, cold very great it is said, and he went  
 bi-a-ma' 'kí zhú-gdhe a-dha'- bi a-ma' ma-schiñ'-ge-in' a-ka'  
 it is said, when with him went, it is said, Rabbit the  
 Ma-schiñ'-ge-in a-ka' wa-sí-si-gě-khti- bi a-ma' i-tan'-dhin-a-ha'-  
 Rabbit the active very it is said before (in front)  
 khti shtí nañ'-ge a-dhe'-nan bi a-ma' kha'-dha shtí a-gdhi-  
 very too run (as animals) went habitually, it is said, back again too he came  
 nan- bi a-ma' U'-sní dhin nañ'-ge shtí u-dhi-shaň- nañ'  
 habitually, it is said, cold the (in motion) run too around him habitually,  
 bi ama' Ní-a-shiň-ga dhiň wa-sí-si-ge i-na-hiň ha e-dhé-gaň  
 it is said person the (in motion) active truly that thought  
 bi ama' U'-sní a-ka' E'-gi-dhe 'ta'-khti win dhi-hi- bi-a-ma'  
 it is said Winter the' And it came to pass deer one he scared up, it is said,  
 U-hú! ne-gí-ha 'ta'-khti win shu-lí ha ki-da gá ha' a'-bi-a-ma'  
 Oho! uncle, deer one to you comes. Shoot! He said, it is said,  
 ma-schiñ'-ge-in' a-ma' Añ'ka-zhi-ha' é-gaň u-a'-na ma'-zhi ha  
 Rabbit the (in motion) no, indeed, so (like) hunt I not.  
 a'- bi a-ma' U'-sní a-ka' Gaň'-ki in-da-dan u-né e-té-dan  
 Said, it is said, Winter the and then what he hunt can he?  
 e-dhé-gan bi a-ma' ma-schiñ'-ge-iň a-ma' E'-gi-dhe ní-a-shin-ga  
 that thought it is said Rabbit the (moving) and it came to pass persons  
 d'ú-ba wé-dha- bi-a-má ma-schiñ'-ge-in' a-má U-hú ne-gí-ha  
 some he had found it is said Rabbit the (moving) Oho! uncle,  
 ní-a-shin-ga d'ú-ba shu- hí-i ha An-han é-gan-nan u-á-ne ha  
 persons (men) some to you they come. Yes, so (such) habitually hunt I .  
 á bi a-má U'-sní a-ká Gan té-wa-dhá-bi-a-má Ní-a-shin ga kě  
 said it is said Winter the and die them he caused it is said men the (lying)  
 wa- 'in' a-gdhá- bi a-má Wa- 'in' a-kí-bi 'kí  
 them carry he went homeward, it is said Them carrying he reached home it is said when  
 ú- han- bi a-má ní-a-shin-ga dhaň-ká Dhi-tú-shka gí-dhi-kú-  
 them he boiled it is said men the who Thy nephew for him hurry  
 dha gá há nan-pé-hiň-khti-an' e-bdhé-gan á bi a-má U'-sní a-ká  
 he hungry very indeed that I think said it is said Winter the

Nin'-de dha bi a-má U-khpé u í zhi bi a-má ní-a-shin-ga 'ta-nú-'ka  
 Cooked he caused it is said Dish for him filled it is said men fresh meat  
 tē Wí é-gan wa bdhá-ta má-zhi nan man' ha á-bi a-má  
 the (collection) I such them I eat I not habitually I do said it is said  
 ma-shein'-ge-in' a-ká wé-'i bi a-má U-man'-e tē  
 Rabbit the to them he gave back it is said Provisions the (collection)  
 dha-snin' bi a-má 'kí shí á-ba-e a-dhé 'i-dhá-bi-a-má U-'sní a-ká  
 swallowed it is said when again to hunt go he spoke of it is said Winter the  
 Añ-gá-dhe taí ma-shein'-ge-in á bi a-má U-'sní a-ká An'-ka-zhi  
 us go let Rabbit said it is said Winter the no  
 ne-gí-ha dhí-nan man-dhiñ'-gá á bi a-má ma-shein'-ge-in' a-ká  
 uncle you only walk (thou) said it is said Rabbit the  
 U-'sní a-ká shí u-'sní ga-ghá b e-gan' shí a-dhá bi a-má  
 Winter the again cold made it is said so (having) again he went it is said  
 I-dhé a-má 'kí ma-shein'-ge-in' a-ká U-'sní i-gá-khdhan  
 he having gone it is said when Rabbit the Winter his wife  
 dhiñ-ké í-ma-ghá bi a-má 'Ti-mí-ha wi-né-gi in-dá-dan  
 or she who, the one sitting questioned it is said. Aunt my uncle what  
 nan'-pe a Dhi-né-gi nan'-pe dhiñ-gé-ě hě. An'-ka-zhi 'ti-mí-ha  
 fears he? Thy uncle to fear has none. No, aunt,  
 wí-e-shtē nan-pe a-t'an' ha á-khtan wi-né-gi nan-pe dhiñ-gé ta-dan  
 I even to fear I have. How possibly my uncle to fear have none will?  
 Dhi-né-gi nan'-pe dhin-gé-ě hě á bi a-má wa-'ú a-ká An'-ka-zhi  
 my uncle to fear has none. said it is said woman the. No,  
 'ti-mí-ha wí-e-shtē nan'-an-ghí-dha nan man' ha á-khtan  
 aunt I even to alarm me habitually I do. How possibly  
 wi-né-gi nan'-pe dhin-gé tá-dan An'-han dhi-né-gi 'pa-shtan'-ga  
 my uncle to fear have none will? Yes. thy uncle Rocky Mountain Sheep  
 'pa nan'-pe hě An-han e-gan é-sdan e-bdhé-gan há á bi a-má  
 head he fears. Yes, so that I thought. said it is said  
 ma-schin'-ge-in'-a-ká Win í-dha - b - e-gan' té - dha - bi a-má  
 Rabbit the one he found it is said so dead he caused it is said  
 'Pá dhan má sa b e-gan' 'in' a-gdhá bi a-má  
 head the with a knife cut off it is said so (having) carrying he went homeward it is said  
 U-'sní a-ká a-kí bi a-má Ma-shein'-ge-in' win'-an-wa-ta  
 Winter the reached home it is said Rabbit in which of two directions  
 dhé-a In'-can-khci á-shi a-dháí a-bi-a-má wa-'ú a-ká  
 went? Now very out he went said it is said woman the  
 E'-gi-dhe 'pá-ze 'kí a-kí bi a-má ma-schin'-ge-in' a-ká  
 And it came to pass dusk when he reached home it is said Rabbit the  
 Ne-gí-ha shé dhan 'pa-shtan'-ga 'pá win' á bi a-má  
 Uncle, that by you the round object Rocky Mountain sheep's head one he said it is said  
 Gi-an'-dha dhé-dha bi a-má 'kí tē-khti a-dhá bi a-má  
 To him threw away go causing suddenly it is said when dead very he went it is said  
 U-'sní a-ká Wa-'ú dhin'-ké e-ná-khci u-shté a-má A'-dan  
 Winter the woman she who only very remained it is said Therefore  
 e-dí-tan u-'sní khti á'-zhi nan' a-ma' She-tan'.  
 from that (time) cold very not habitually (it has been) it is said, That far.

NOTES.—Three sounds of n are used in this Fable; n, as in no; n, as in the French bon, vin, un, etc., designated in the Dhegiha Grammar by "a superior n"; and n, as in sing. Ma-shein'-ge-in, sometimes called ma-shein-ge, the rabbit; also ma-shtin. Cf. Dakota, ma-shtin-ca; Ojoe, mi-shein-e; Winnebago, wa-shein-a-ma (line 1), article-pronoun, often



in plural, but here singular of motion. Dhe, to go; Cf. Dakota, ya; Ojoe, re. A-ma-ma (line 1), article pronoun, implying motion at a remote past time, not seen by the narrator, hence its use in fables. So a-ka-ma implies *rest* at a *remote* past, *not seen* by the narrator; a-ma often means motion in *recent past*, or even *now sometimes seen*; aka, *rest* (standing, sitting); otherwise refers to *one* subject of action, when a-ma refers to *more than one*. After abi or -bi it shows that the speaker obtained the information from another; so it may be translated by "it is said." Abi-a-ma-ha corresponds with the Ojoe a-nye ke. U'sni, cold, used here for madhe, winter. Hi, to reach a place, not his home; P. a-hi. In fables, etc., the plural form of the verb is used even with singular subject, before -bi-ama. Ti, to have come to this place, not his home. Dhanshti, refers to past time, and implies that what was then, is not now. Nan, expresses habitual action, or what is done again and again. Man'shnin dhadhinshe, you who have been walking, keeping in motion for some time; dhadhinshe is from article pronoun dhin, refers to a single animate object in motion; S. I., a-dhin-he. So pi-adhinhe, I (who) have been coming to this place, not my home. A, an interrogative. An-khdhi, from gakhdhi, to strike and kill. Shkan-azhi, from shkan, to move, act; akhtan ate tadan, why should I die? The question shows that the speaker considers it an impossibility; so below, when he asks the woman about her husband. Adhab egan, contracted from adha-bi egan, having gone out. He-gazhi, not a little, the e has a prolonged sound. Nange, to run, as animals; but 'tan-dhin to run as men. Winter called the Rabbit a "man" (niashinga.) Shui shows that the rabbit was not with the Winter, but in sight. Ete-dan, a form of the thought interrogative; it is not used in addressing a person. Wedhe, to find several animate objects; for one, or for inanimate objects, idhe must be used. Te-wa-dhe, to cause them to die, wa-being the sign of animate plural. U-han', to boil vegetables, meat, etc. But u'-han, to boil the bodies of men. Dhi-'tu'-shka, said to a woman; to a man, dhi-'tan'-shka, thy nephew. Nan'pe, to fear a visible object, but 'ku'he, to fear something invisible, future evil. He, oral period used by women, as ha is by men. Nan-ghi dha, to alarm; inserts fragment pronoun, an-me, nan-an-ghi-dha (to a-me-larm), to alarm me.

## THE DELAWARE INDIANS IN OHIO.

### *The Location of their Villages at the Time of the Revolutionary War.*

BY STEPHEN D. PEET.

Read Before the State Archaeological Association of Ohio, September, 1878.

The tribe of Delaware Indians was one of the most powerful and numerous of all the tribes which formerly occupied the Mississippi Valley. They are now almost extinct, having been reduced to about three hundred persons, who are located in the Indian Territory and rapidly mingling with other tribes of the region so as to lose their identity as a distinct people, but they once held a very important place in the history of our country. The first known of them was at the time of the settlement of the sea-coast by the whites. They were then located on the Delaware River, and the name Delaware was given to them from the river and from the State where they were first known. It was from them that William Penn made his purchase of land in Pennsylvania, and from them, too, the celebrated walking purchase was made, by which all land lying on the Delaware River was included in a tract around which a man was supposed to walk in a single day. They belonged to that great Algonquin race who formerly held possession of the whole northern half of the United States, and whose territory extended from the coast of Maine to the Mississippi River, and from the lakes to the Ohio River. Their tradition concerning themselves is that they had formerly emigrated from the far west, in company with their cousins, the Iroquois. The tradition was preserved by Heck-

welder, who was a missionary among them. They found to the east of the Mississippi another race, who were called the Tellegewi, but forming a confederacy with the Iroquois, they after long wars were able to drive them out and took possession of their territory. The Delawares seem to have been a very ancient people, as they were designated by the other tribes by the name of Grand Fathers. Who the Tellegewis were, and whether they were the Mound Builders, it is not now in point for us to consider. There are those who maintain that the Cherokees were originally located in this vicinity; that they are the race referred to in the tradition, and the very name is cited as proof. At the time of the settlement of Pennsylvania, the Delawares occupied the country and called themselves Leni Lenape. According to Mr. Schoolcraft the term meant Manly Men; according to the missionary, Heckwelder, it meant Original People. Loskiel translated it Indian Men. The Delaware word for men was Leno. Dr. Barton asserts that the nation was divided into three tribes or branches, called respectively the *Unámes* or *Wanámi*, the *Unaláchtigo*, or *Wunaláchtigo* and the *Minsi*, *Monsees*, or *Minnisinks*. These all belonged to the Algonquin stock. The Delaware River was called by them *Lenape Whittuck*, etc. The tribes not only occupied the greater portion of Pennsylvania, but the most of New Jersey. They are described by the whites at their earliest acquaintance as a comparatively peaceable people.

De Laet, in 1624, mentions the fact that the eastern bank of the Hudson River was from its mouth inhabited by Manathanes (Manhattans), a cruel nation at war with us, but represented the Delawares living on the opposite shore under the names of Sauhikans, as a more humane and friendly nation. According to Gallatin they occupied the country along the Atlantic coast from the mouth of the Hudson southward, and were divided from the Nanticokes and the Susquehannocks by the heights of land which rise between the Delaware and the Susquehanna. They were also separated from the Mohawks upon the north by the Catskill Mountains, but occupied lands on both sides of the Delaware and Schuylkill, and as far south as Sandy Hook. They were subdued by the Iroquois as early as 1620, and were made women of, as the Indians express it; that is, they were not allowed to go to war without the consent of their subjugators, and could not hold even treaties for themselves. The usual fire-arms were prohibited to them, and as the Quakers were also non-combatants, they remained in the land, and for sixty years after the whites began to settle it, the utmost harmony prevailed between the two races. They at last, however, found themselves in the same situation as other Indians. They had sold their lands and were without means of subsistence and were compelled to seek refuge

elsewhere. They at first removed to the Wyoming Valley, and were located on the east side of the Delaware river, while the Shawnees were on the west side. Here a quarrel arose between the two tribes over a very trifling affair. Some of the Shawnee women having wandered over to the east side of the river, and one of the children happening to find a large grasshopper, the children and the squaws got into a quarrel, which finally involved the two tribes. The Shawnees were defeated, and immediately moved west of the Alleghenies. The Delawares were also soon driven by the incursions of the whites to the borders of Susquehanna and Juniata, to land belonging to their enemies, the Iroquois. Here again they were encroached upon by the settlers, and in 1740 determined to remove west of the Alleghenies, and to accept the grant of a direlict country from their ancient allies, the Wyandottes, on the Muskingum river. They were, however, much attached to their homes in Pennsylvania, and did not until a late day abandon all claim to this territory. In 1744 they ceded by the treaty of Lancaster all that part of their territory which might be within the province of Virginia. A treaty was also made with them at Easton in 1758, by which they surrendered their title to all the lands in New Jersey and on the Delaware. At this treaty their name was associated with the Nanticokes, Mohicans, Manhattans, and Iroquois. It was the last time that their name appeared among the tribes belonging east of the Alleghenies. After that date their name is associated with the western tribes, although the Iroquois frequently appear in all their treaties. It has been mentioned that the Delawares were called Grand Fathers by all these western tribes. What the actual connection between the races was we cannot determine. They all spoke the Algonquin language, which was quite different from the Iroquois, but the tribal dialects of this language also differ. In the vocabularies of Heckwelder, Zeisberger, Lieut. A. W. Whipple and others, we have recorded a large percentage of the language of the Algonquin family. There is also in existence a Delaware Indian spelling-book and a grammar prepared by Zeisberger, the latter having been translated for the American Philosophical Society of Philadelphia, from the German manuscript of the late Rev. David Zeisberger, by Peter Stephen Duponceau, Philadelphia.

The period of their greatest power was immediately after their removal west of the Alleghenies. They were here free from the dominion of the Iroquois and united with the Shawnees, who were settled upon the Scioto. Here they became again a race of warriors.

The location of the Delawares after their settlement on the Ohio has been described by various travelers and explorers. The

first account of their villages west of the Alleghenies is given by D'Celeron, who led the expedition down the Ohio for the purpose of planting the plates as proof of the French claims. He incidentally mentions a number of Indian villages, and among them some which were occupied by the Delawares. He says in his journal: "On the 29th [June 29th, 1749] at noon, I entered La Belle River. I buried a plate of lead at the foot of a red oak on the south bank of the river Oyo and Chenango, not far from the village Kanagon, in lat.  $42^{\circ} 5' 23''$ ." Mr. O. H. Marshall thinks this village was situated on the spot which is now called Warren, Pa., consisting then of Senecas and a few Loups. The Loups were a branch of the Delawares called by the English Munsees. The river was the same as Conewango, which name is only a modification of the former Indian term. Another village which this expedition visited was called by the French, Paille Coupee. This was a Seneca town, and its name, supposed to be given by the French, was only a translation of a Seneca name, De-ga-syo-nok-dyah-goh, which signifies in English, Broken Straw. The village was at the junction of the Broken Straw Creek and Allegheny river, on the right bank of the Allegheny. The expedition after leaving this place proceeded about four leagues and came to a village of Loups and Renards, composed of ten cabins. Four or five leagues further they passed another small village, consisting of six cabins, and on the 3d of August another of ten cabins. The next was a village on the river Aux Bœufs. According to Father Bonnecamp, they passed one village on the left and four on the right, the latitude of the third being  $41^{\circ} 30' 30''$ , and being  $79^{\circ} 20'$  west. The village on the Aux Bœufs was probably not far from the present site of Franklin, on the river now called French Creek. At this time it contained ten Indian cabins. Another village visited by Celeron and his company was Attique, containing twenty-two cabins, and situated on the Kiskiminitas River. This river falls into the Ohio about twenty-five miles above Pittsburg. Chinique was also another village, and one which at this time was the largest on the route. It consisted, according to Father Bonnecamps, the secretary of the expedition, of about eighty cabins, and was occupied by Iroquois, Shawnees, and Loups, with some Abenakis and Ottawas. The place was subsequently known as Logstown, a very important point in the early history of the occupation of the Ohio by the whites. Between Attique and Chinique the party passed a village which had been deserted by its inhabitants. It was described by Celeron to be "the finest place on the river." This was probably the site where Pittsburg now stands. It was then a village of the Loups or Delawares, and occupied by a woman who was re-

garded as a sort of queen, and who was devoted to the English. Another village visited by this party was called St. Yotoc, though Father Bonsecamps wrote the name Sin Hioto. It was probably near the Scioto, being situated on the south bank of the Ohio, opposite the mouth of that river. At this time it was occupied by Shawnees, Iroquois, Loups, Miamis, and representatives from nearly all the nations of the upper country. The party of Celeron also visited other villages, but they were not properly those belonging to the Delawares. At the mouth of the Miami, or, as he called it, the Riviere à la Roche, they planted a sixth leaden plate, and then, after thirteen days of voyaging up the Miami, they came to the village where dwelt the chief of the Miamis, at a place which they called Demoiselles. It was situated on Loramies Creek, near where Fort Loramie was subsequently built. Kiskakon was also another village of the Miamis, situated where Fort Wayne now stands. Other travelers after De Celeron have described the villages on the Ohio. Washington, in the journal of his expedition to Presque Isle, says: "About two miles from this (the forks of the Lebeauf or French Creek and the Ohio), on the southeast side of the river, at the place where the Ohio company intended to lay off their fort, lives Shinghiss, King of the Delawares." This place was, Mr. Hildreth thinks, near the river, a short distance south of Ree's Rocks. Christopher Gist, also, in 1751, passed through their territory. He visited a town called Muskingum, inhabited by Wyandots, who he says are half of them attached to the French and half to the English, containing about one hundred families. This was on the Muskingum, or, as the Indians called it, the Elk Eye Creek, a few miles above the mouth of the White Woman's Creek. He also visited one other town, five miles out of Muskingum, on White Woman's Creek. This white woman was taken away from New England when she was about 10 years old, by the French Indians. Her name was Mary Harris, and at the time she was about 50 years old, and had several children. "She remembered that they used to be very religious in New England, and wonders that the white men can be so wicked." On the Hockhocking, Mr. Gist also found a small town of four or five families, and on the Scioto another Delaware town of two families; fifteen miles further south he came to a town called "Hurricane Toms," consisting of five or six families; and again twenty-eight miles further, on the east side of the Scioto, was another Delaware town of twenty families. He says this is the last of the Delaware towns to the westward. The Delaware Indians, by the last accounts I could gather, consist of about five hundred fighting men, all firmly attached to the English. They are not properly a part of the Six Nations, but are scattered

among most of the Indians on the Ohio, and some of them among the Six Nations, from whom they have derived their land.

Perhaps the map which best describes the Indian towns west of the Alleghenies is that of John Mitchell, published in 1755. The location of the Indian tribes upon this map is as follows: The Iroquois in large letters stretching from the Kanawha River to the St. Lawrence and Lake Champlain, embracing Senekas, Cayugas, Onondagaes, Tuscaroras, Mohawks. The Messessagues, "removed hereabouts" are located in the State of New York, near Seneca Lake. The Susquehannoughs, "subdued by the Six Nations and mostly removed to the Ohio," are located among the mountains along the east branch of the Susquehanna. The Mingoes, "removed from Susquehannah," are upon the Allegheny river, near Chatauqua Lake. The ancient Eries stretch along the south shore of Lake Erie, from the Miami to the French Creek. Ohio Indians, in large letters, are located south of these, from the Miami River to the Allegheny Mountains. The Delawares are located from the Scioto to the Beaver River, north of the Ohio, and the Shawnees are just south of them, on both sides of the river, stretching from the Miami River to the mouth of the Allegheny. The Indian villages mentioned on this map are as follows: Mingoes, near the mouth of French Creek, but opposite and east, Mohickans on the Beaver River; also, Oendoes, first settlement on the Ohio, situated between Kittanning and Kuskuskies, Allegheny, Old Shawneetown, English settlement on the Allegheny River. The Senekas are placed near Logstown, and Muskingum is called a town of the Oendoes. North of Muskingum is a town called Tuscaroras. White Woman's Town is at the Mouth of White Woman's Creek, on the Muskingum. A lower Delaware town is located at the mouth of the Scioto. The Lower Shawnoah, or Lower Shawnoes, "an English factory four hundred miles from the forks by water," is situated also opposite the Delaware town at the mouth of the Scioto, while Harriskintons is on the Salt Creek, and Kiskoni-toes Town is on the Ohio, near the mouth of the Hockhocking. These constitute all the Indian villages belonging to the Delawares mentioned by the map. To this a number of English settlements might be added, settlements which had taken the place of the Indian villages which formerly existed. These are as follows: (1) Shenango, or Cheninque, an English settlement at the mouth of the Kawanagon River. (2) Venango, at the mouth of the Buffalo River, "lately called French Creek," 35 miles. (3) Kittanning, 15 miles down the Ohio. (4) Kuskuskies, chief town of the Six Nations on the Ohio, an English factory, 30 miles west from Kittanning, on the Beaver Creek. (5) Logstown, "built and settled by the English several years ago, at

the mouth of the Beaver River and on the Ohio, 28 miles southwest from Kuskuskies." (6) Muskingum, English factory on the Elk Eye Creek [Muskingum River], 100 miles due west of Logstown. (7) Fort Duquesne is put down as a fort "usurped by the French in 1754," with a battle-ground [Braddock's] southeast of the fort, bearing the date July 9th, 1755. West of Muskingum 125 miles is Hockhocking, or Margaretstown, at the headwaters of the Hockhocking River. Still west of this, at the head of the Miammee or Rocky River, is Pickawillany, "one hundred and fifty miles from Ohio River." "English fort established in 1748, the extent of the English settlements." It is stated also on this map, the first settlement of the English on the Ohio was at and about Allegheny, about thirty years ago, since which they have extended their settlements from Chenango to Pickawillany. There is a town, also, on Lake Michigan named "Kuadoghe," (Chicago?) "so called by y<sup>e</sup> Six Nations, y<sup>e</sup> extent of their territories and bounds of their deed of sale to y<sup>e</sup> crown of Britain 1701, renewed in 1726 and 1744." There are no other English *settlements* mentioned, but along the south shore of Lake Erie are located several forts, one near Aqualas Creek, probably Erie, "forts lately usurped by the French." Next is Sandoski, or Canahogue, "the seat of war, the mart of trade, and chief hunting-grounds of the Six Nations on the Lakes and the Ohio, usurped by the French in 1751." This is forty miles west of Canahogue Bay, where is an Iroquois town, called Gwahago (Cuyahoga). A fort, usurped by the French, 1750, is located on Miamis River. Another fort, Fort St. Joseph, is on the St. Joseph River, and a fort of the Miamis upon the Illinois River, Fort Chartres upon the Mississippi River near Kaskaskia, and a fort "and mission of St. Francis Xavier, at the head of Bay Puyans (Green Bay). Mission of St. Mary, old settlement of the French, abandoned, is upon the north side of the straits Messelimakinac [Mackinac]."

In explanation of this large number of English settlements and of "usurped" forts, on the map, it should be said, that up to this date, the English had conducted nearly all the trade in furs on the territory along the Ohio, while the French monopolized the trade on the lakes and western rivers. It must be remembered, too, that the Iroquois were friendly to the English, and that they had ceded the land to them by various treaties. The only French occupation was, at Ft. Duquesne, "usurped by them in 1754." After the war of 1755, the English were left in entire possession of this territory. By the treaty of Utrecht, made in 1763, France ceded her claim to the whole country, and the Indian tribes, whether allies or not, necessarily came under English authority.

We notice, from the foregoing descriptions, that the Delawares dwelt altogether on the Ohio. This river, about the time of the advent of the white man, became the highway of the Iroquois, and its banks were nearly deserted by other tribes. The Delawares were friendly with the Iroquois, and their habitations were, therefore, found on the head-waters of that river, adjoining the home of the Iroquois. Their villages were occupied by members of the different tribes, and on the earliest maps we find names of the Senecas and of the Mingos or Munsees, intermingled in this locality. The Shawnees were generally hostile to the Iroquois, and had their habitation farther away. Their villages were located at the mouth of the Maumee and near the falls of the Ohio.

After their removal beyond the Allegheny mountains, the Delawares remained, for a time, friendly to the English. Washington, in the journal of his expedition to the forts on French creek, and at Presque Isle, speaks of the fidelity of the Indians which he took with him, notwithstanding all the efforts of the French to alienate them while he was transacting business at the fort. There is no doubt that the Delawares took part with the French for a time during their contest with the English. They were among the attacking party at the time of Braddock's defeat. There were good reasons, however, for their having been alienated from the English, for not only had they been deprived of their lands, but it is stated by the English themselves, that the depraved character of the English traders did much to keep alive the resentment. The Quakers maintained that this enmity between the Delawares and themselves could be prevented, and the Governor of Pennsylvania, in a message to the Assembly, speaks of the abuses practiced by the traders. After the treaty of Lancaster, in 1744, he says, "Is it to be wondered at, if they should take some severe revenges? If I am rightly informed, the like abuses in the traders in New England were the principal causes of the Indian wars there."

The occupation of the valley of the Ohio by the French had also great effect on the Indians there. The French flattered the pride of the savages, made frequent presents and treated them kindly. The English treated them differently; the English traders robbed and bullied them; English officers treated them with contempt, and the steady advance of population threatened to deprive them of their lands. They saw their hunting grounds encroached upon, their game driven away and they themselves crowded farther and farther to the west. The Delawares had more reason to realize the extent of these incursions than other tribes. The English rebuilt Ft. Duquesne and gave it the name of Ft. Pitt, and English traders were constantly traversing the



thick forest. The incursions of the white settlers also became so great that, after the war of 1763, the barrier of law was obliged to be set up to protect them. Doubtless, the exasperation of the Indians was also increased by the influence of the French. They were able to alienate even the Iroquois, and other tribes were much more easily influenced than they.

The frontiers of Pennsylvania were continually harassed by the Delawares. To guard against these incursions, a chain of forts was erected along the border of that province. These were Fort Henry, on the Susquehanna at the pass of the Swatara; Ft. Lebanon, at the forks of the Schuylkill; Ft. Allen at Gnaden Hutten; Ft. Morris, at Shippensburg; Ft. Lowthers, at Carlisle; Ft. Granville and Ft. Shirley on Augwide creek; Ft. Littleton and Ft. London on Conococheogne creek. Still, the Delawares penetrated beyond the lines of these forts. Kittanning, an Indian village on the Allegheny river, where Capt. Jacobs and Shnighiss lived, was their rallying point. Col. Armstrong, in 1756, attacked and burned the place and broke up this rendezvous of the Indians. During the autumn of 1758, the condition of the frontier was lamentable indeed. Notwithstanding the treaties of Albany, Lancaster and Easton, the allies of the English had become alienated, and the hostility of all the tribes was brought upon them. An attempt was, however, made at last by the English to win over the western tribes, and peaceful measures proved successful. The man who did the most to accomplish this was Frederick Christian Post, in '37. Of his journey his own journal is the evidence. He left Philadelphia the 18th of July, 1758, and proceeded up the Susquehanna, "passing many plantations deserted and laid waste." He came to the Allegheny opposite French rule, and was forced to pass under the very eyes of the garrison of Ft. Venango. From Venango he went to Kushkuskee, which was on Big Brown creek. This place, he says, contained ninety houses and two hundred able warriors. The great conference was at Ft. Duquesne. It was evident that the Delawares were wavering in their affection for the French, but through Post's influence with them, a peace was concluded. Post was sent again westward with the chief of the Six Nations, and a second time kept the Indians from joining the French, and it is said, also, kept the savages from gathering a force to waylay Gen. Forbes on his march, so that they were able to reach and take possession of Ft. Duquesne and, perhaps, saved others this way. Thus, this humble Moravian, by pacific measures, played an important part in securing to the whole interior of the continent to the English, and so to the people who now occupy it.

With the fall of Fort Duquesne and the capture of Niagara

all direct contest between the French and the British was closed. Still the Indian tribes of the West did not easily transfer their allegiance. The French continued to inflame the minds of the savages. At last the great conspiracy broke out. All the tribes from the mountains to the Mississippi were in a ferment. The messengers of Pontiac carried the black wampum and the tomahawk to the villages of the Ottawas, Ojibwas, Pottowattomies, Foxes, Menominees, Illinois, Miamis, Shawnees, Delawares, Wyandots, Senecas, and the tribes of the south. The council of all the tribes was held on the 27th day of July, 1763. The plot was wide-spread. The savages fell upon all the forts at one time, and the blow was struck suddenly. Mackinac and St. Joseph and Chicago and Miami and Sandusky and Presque Isle were taken. Of all the forts held by the English in the great west, not one remained in the possession of the troops which had so recently occupied them, except the garrisons at Detroit and at Fort Pitt.

The border was one vast scene of slaughter and desolation. Everywhere were the ashes of cabins and the charred bones of their tenants. Twenty thousand people in Virginia were driven from their homes. The decisive battle was at Bushy Run, near Pittsburgh; the attack was a severe one, but the savages were repelled. They, however, returned and the battle lasted until night put an end to the conflict. In the morning the battle was renewed but the savages were at last defeated. Ft. Pitt was relieved. This closed the campaign. The resistance of Detroit and the relief of Ft. Pitt defeated the ends of the conspiracy. All hopes of co-operation were now at an end. The effect of this conspiracy on the colonists was very great. They at once hastened to redress the wrongs which had been practised upon the Indians, as if conscience had asserted itself amidst the alarms. The spirit of justice often follows the footsteps of fear and the very efforts now made to conciliate the savages show what the wrongs were, which the public conscience recognized. The Government of England issued a proclamation containing prohibitions and restrictions, and guaranteed to the Indians the exclusive possession of the land. Col. Boquet was also sent through their territory to make peace. He found the Delawares very ready to submit again to the English allegiance and the return of all the prisoners in their possession was immediately effected. The Shawnees were less ready to comply with this demand, but they and the Wyandots yielded and upon the Delaware territory the appointment was made. This return of the prisoners proved to be a most touching and tragic event. The long wars under the French and under the Indians had been attended with so many incursions, slaughters and captures, that

scarcely a community throughout the frontiers, and we might say, throughout the whole land, had escaped invasion; all were interested in ascertaining the fate of their loved and lost. The event also proved to be a tragic one to the Indians themselves, for, according to their custom, none had been spared from the usual fate of captives, the terrible torment and death, except such as they had saved from some personal motive, and afterwards adopted into their tribes. Affections had grown up and the captives had become attached to their captors and with their new lives, that they had even to be bound and taken by force to their friends, and even then they were followed by their husbands and by their adopted friends, and the strongest expressions of grief were manifest.

In 1765, Col. Boquet and his army traversed this region and from his journal we may learn more about the villages belonging to the Delawares than even from the maps. We give extracts from his journal, concerning the villages: "In this day's march (Oct. 15) the army passed through Logstown, situated seventeen and a half miles, fifty-seven perches, by the path, from Ft. Pitt. This place was noted, before the last war, for the great trade carried on there by the English and French. but its inhabitants, the Shawnees and Delawares, abandoned it in 1750. The lower town extended about sixty perches over a rich bottom to the foot of a low ridge, on the summit of which, near the declivity, stood the upper town, commanding a most agreeable prospect over the town and quite across the Ohio, which is about five hundred yards wide here, and, by its majestic, easy current, adds much to the beauty of the place. About a mile below the confluence of the Big Beaver creek with the Ohio stood, formerly, a large town on a steep bank, built by the French, of square logs, with stone chimneys, for some of the Shawnee, Delaware and Mingo tribes, who abandoned it in the year 1758, when the French deserted Ft. Duquesne. Near the fording of Beaver creek also stood about seven houses, which were deserted and destroyed by the Indians, after their defeat at Bushy Run, 1763, when they forsook all their remaining settlements in this part of the country. On the 13th of October the army crossed Nemenshehelas creek a little above where it empties into a branch of the Muskingum, and a little further on they came to the main branch of the Muskingum, about five yards wide. A little above the forks of this river is Tuscarawas, a place exceedingly beautiful by situation. From the ruined houses appearing here, the Indians who once inhabited this place, and are now with the Delawares, are supposed to have had about one hundred and fifty warriors. The distance was twenty-one miles and one-quarter, and thirty-six perches from Ft. Pitt to this camp on the Muskingum. The

army moved two miles and fifty perches down the Muskingum to Camp No. 13, formed by a very high bluff, with the river at the foot of it, which is upwards of one hundred yards wide at this place, with a fine country at some distance from its forks. This, Mr. Hildreth thinks, was the spot afterwards where Ft. Laurens was built.

The place fixed upon as the point where the different tribes should surrender the prisoners which were in their hands, was situated near the forks of the Muskingum, and was called Wautamike. This place was fixed upon as the most central; the principal Indian villages being situated around it at a distance of seven to twenty miles, except Lower Shawanese town, situated on Scioto river, which was about eighty miles. Thus, we have the evidence from four different sources in reference to the Delawares and their locations. We have been thus particular in giving the exact words of these different reports, and in describing their routes, that the spots where these villages stood may be identified.

The history of the Delawares during the Revolutionary war is a peculiar one. The disturbance incident to Pontiac's conspiracy had hardly ceased before the contest between the colonies and the mother country took place. Previous to this conspiracy, however, a mission under charge of the Moravians had been established among this tribe. Frederick Post, the same courageous man whom we have mentioned, obtained permission from the Delawares to settle among them. He built a cabin in 1761 on the east side of the Muskingum, near the junction of the Sandy and Tuscarawas Rivers, not far from the Indian town of Tuscarawas, which contained forty wigwams. Another Indian village was situated eight miles above. John Heckwelder was his companion. In 1772, Rev. David Zeisberger established a mission two miles below New Philadelphia, which he named Shoenbrunn, or Beautiful Spring. Another settlement was commenced at Gnaddenhutten, a few miles south and another at Salem. The Indians began to acquire the arts of civilized life. Churches were erected, schools established, land cultivated, and they were surrounded by the appearances of civilization. But the Christian Indians had to undergo many trials of their faith. They were obliged to abandon Gnaddenhutten for a while to escape the annoyances of white banditti. The Wyandots and their own uncivilized kinsmen sought to make them abjure their new mode of life. The British and their Indian allies, with the Wyandots and others resolved to remove their teachers by force, because the converts refused to take up arms against the colonies. In 1781 the whole community were obliged to remove from their pleasant homes, their growing fields, and take up a new

abode near Sandusky. Those living upon the borders had also conceived a prejudice against these settlements on account of their neutrality, and as a portion of this removed colony returned to gather their crops at Gnaddenhutten, a band of reckless men, under Col. Williamson, attacked and in cold blood murdered the inoffensive people, men, women, and children, even though they called God to witness their innocence, scarcely waiting for the Christian natives to pour out their souls in prayer. But the retribution soon came, in the capture of Col. Crawford and his tragic death. His expedition was led against the hostile Indians and the Wyandot towns on the headwaters of the Scioto and Sandusky. The army marched from the deserted Mingo village, seventy-five miles below Pittsburg, under the command of Col. William Crawford and the same Col. David Williamson, the leader in the infamous slaughter. They passed through Shoenbrunn, on the Muskingum, and came to Upper Sandusky. A battle took place three miles north of the Upper Sandusky of the modern map, and one mile west of the Sandusky River, near Leesville, in Crawford county. In endeavoring to retreat, Col. Crawford was captured by a party of Delawares. Wingenund, the Delaware chief, charged Crawford with joining himself with Williamson in an attempt to kill the remainder of the inoffensive Indians, and said: "The Moravians whom you went to destroy having fled, instead of injuring their brethren, the offense has become national, and the nation itself is bound to take revenge. All the nations connected with us cry out revenge, revenge." Captain Pipe, a Delaware chief, also made a speech to the Indians, and then the terrible torture began. A slow death by fire, lasting for several hours, was the fate which awaited Col. Crawford. Burning fagots and poles surrounded the victim, burning coals and hot embers were thrown upon him, seventy loads of powder were discharged upon his naked body, burning pieces of wood were applied to his naked wounds. Through his sufferings he besought the Almighty to have mercy upon his soul, spoke low, and bore his torments with manly fortitude. Thus perished one of the victims of this war at the hands of the Delawares.

The Revolutionary war resulted in the removal of the Delawares from their former settlements. They were after this mingled with the Wyandots and the Shawnees. They were also engaged with the Miamis and other western tribes in the attack on Gen. St. Clair, but were overcome by Mad Anthony in the fierce battle on the Maumee and thenceforward disappeared from this field. The remains of their former habitations may possibly be discovered by those who are now living in the region where their villages once stood.

## THE SILENT RACES.

BY. L. J. DUPRE.

High o'er the desert's scorching plain  
Rises the Orient's stately train  
Of strangely sculptured stone;  
Grim sentries of a vanished race,  
Guarding from ruin's stealthy pace  
Dim records which their marbles trace.

The gaunt-eyed sphinx essays to speak;  
Her moveless lip and hueless cheek  
Have found a human tone;  
Over the hopes, the joys, the fears,  
The tumult, of the rushing years,  
The listening world her whisper hears.

Dark Egypt's lore of hearts and homes  
Lies in her dust-crowned catacombs;  
Her pyramids of stone,  
Like giant volumes in the sand,  
Teem with the records of her land,  
Writ by the marble's stony hand.

The nameless altars, rude and dark,  
That worship of the Druid's mark,  
Ring with a monotone  
Wild as the symbolistic line  
That rose o'er Thor and Odin's shrine,  
Where now the pallid moonbeams shine.

The ruined abbey's wind-rocked bell,  
Whose elfin echoes rise and swell,  
Like mighty spirits moan—  
The owl that watches in the tower—  
The wind, a wandering troubadour—  
Chant sad requiems o'er and o'er.

This western world her voice of might  
Lifts up amid her dreamless night,  
With weird and wondrous tone;  
For silent, vanished races sleep  
Beneath her tossing forests deep,  
Where hoary-headed ages sleep,  
While restless murmurs round them creep.

Each nameless mound that plants its base  
Within this mighty wilderness  
Speaks with a mystic tone.  
Around each rude-shaped urn and vase  
Flit dim shadows of a race  
Whose voiceless story God can trace.

Whence came they? Whither did they go?  
What myriad tales of joy and woe  
Resound with mingled tone  
Above this consecrated ground,  
That speaks with hollow, ghastly sound,  
Its orator, a nameless mound.

And did they love? and did they hate?  
Did they in pain and pleasure wait  
With human laugh or moan?  
No answer comes, no music rings,

No Solon speaks, no Homer sings  
Where Sleep and Silence reign as kings.

The dark-eyed maiden's liquid song  
Ringling these limpid waves along,  
Has left no echoing tone.  
In nameless graves, they slumber well,  
Where Lethean billows ebb and swell  
On shining shores of Asphodel.

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## SACRIFICIAL MOUNDS.

### EXCAVATIONS AT CHILLICOTHE, ILL.

The region surrounding Chillicothe is peculiarly rich in remains of the strange people who once inhabited the country, and left imperishable evidences of their labor behind, extending from Lake Superior to the isthmus, from Ohio to the Pacific. Of them and concerning them history is silent. No record exists of their achievements and progress, no sculptured memorial attests their skill and greatness, yet all about us is proof that a population vastly greater than now abounds once inhabited these valleys and reared these mysterious structures. Investigation and research tell us for what purpose these mounds were made, but from whence the builders came, in what age they existed, and the cause of their final disappearance we know absolutely nothing, and all is resolved to the region of conjecture. Mounds are of three kinds, viz: observation, worship, and sepulture or sacrificial—the two latter often combined in one. Upon the former, beacon-fires were built, and intelligence conveyed from one part of the country to another. They are usually circular, though many of the second class imitate the forms of animals and men.

A recent exploration of a mound near this place resulted in some interesting discoveries. A survey made showed a base of sixty-six feet, and a height of some nine or ten. A channel two feet wide was begun at the base, which was designed to run to the center, but owing to the insufficiency of time and the want of help, was abandoned, and a partial excavation made from the top. A previous exploration had resulted in the discovery of numerous remains, but at three feet below these a well preserved skeleton was found lying on its back, with head pointing southwest. The form was large, the jaws massive, and the teeth perfect. At the feet lay the bones of an infant, and the skeleton when living, was probably a female and a mother. As the excavation progressed, the shovelers threw out a peculiar black, closely compacted clay, which on examination under a glass, showed crystals of blood. Mixed with this was a loose, friable

soil, which proved to be ashes. Last came a layer of stones, and this told what was before suspected, that we had struck a sacrificial mound, and one of the most important yet discovered. The victims, whether prisoners of war or immolated to please some supposed deity, were slaughtered and burned, the blood running with the earth beneath, to tell the story untold centuries later of the sacrifice. Intermixed with the soil just above the stones were found bones much decayed, but whether they were remains of the victims, or were interred there for a purpose, cannot be told. Possibly there was connected with it a ceremony similar to one witnessed by Cameron among the savage tribes of Africa. A chief having died, an immense pit was dug, the bottom of which was covered with a layer of closely-packed living women. Upon these was placed one of the wives of the chief, on her hands and knees, and upon her back the dead chief was laid with his beads and treasures, supported by two other wives at his head and feet. The earth was then shoveled in, and fifty or one hundred slaves slaughtered over the whole and their bodies thrown upon the pile.

With the exception of some ornaments, no other discoveries were made, the lateness of the hour preventing anything like a thorough investigation.—*Lacon (Ill.) Home Journal*.

#### SACRIFICIAL ALTARS FOUND IN OHIO.

One of the most interesting and important discoveries has been made under the direction of the Madisonville Literary and Scientific Society, on the tract of land which has long been known as "the Mounds," near Ferris' woods, above Red Bank, not far from the line of the Little Miami Railroad. For several months the Society named has given one or more men constant employment in digging for relics in this region. The "mounds" cover a hundred acres, or such a matter, and it has been the purpose of the Madisonville Society to dig the entire tract over with sufficient care to render it certain that none of the ancient relics which the ground thereabouts is known to contain shall be missed. A number of important discoveries were made two or three months ago, and their publication has attracted the attention and elicited inquiries from scientific men and societies in different parts of the country.

The discovery of the past week is much the most valuable yet made. It consists of what is supposed to have been an ancient sacrificial altar, with the remains of the sacrifices still upon it. The following diagram gives a sectional view of what was found, and shows the different layers through which the workmen dug and the material composing them:

1. Two feet of rich, black surface soil, principally leaf mold.



2. Layer of gravelly clay 15 inches in thickness, containing numerous animal remains, with occasional relics, consisting of stone, flint and bone instruments, and shards of pottery ware.

3. Layer of pure grass ashes, 4 inches in thickness, intermingled with which were bones of deer, elk, raccoons, opossums, squirrels, turkeys, minks, woodchucks, and bear, together with mussel-shells of various species.

4. Layer of burnt twigs and cornstalks, and underneath it a layer of coarsely woven matting, apparently made of grass or bark, completely charred.

5. Layer of shelled corn, about four bushels in all, completely carbonized.

6. Layer of completely carbonized corn on the cob, entire depth of corn 6 inches.

7. Layer of boulders, pottery shards and ashes, with a few animal bones, six inches in thickness.

The depth of the layer of boulders, which forms the floor of the altar, below the surface of the earth is four feet and eleven inches. The corn and floor of boulders were found in one of the loops only, or in other words, upon only one side of the altar, the corresponding space on the other side being filled with earth.

There is good evidence that the place is an ancient cemetery. Many well preserved skeletons have been found of people of all ages. They indicate that the race whose burying ground was there were stout and well developed; but they were not Indians. The skulls show this, and it is also evidenced by the fact that within the history of the occupation of this country by the Indians the region in question had been covered by a thick forest, and was not the special abode of any of the tribes.

The position in which the skeletons are found indicates system and care in their burial. The body was uniformly placed upon the left side in a reclining position, the left arm holding a pot supposed to have contained food, and in many instances valuables. In some cases trinkets and ornaments were placed about the body. The graves were not deep, rarely more than two feet.

Under an oak tree six feet and two inches in circumference, a skeleton was discovered, with its lower extremities extending beneath the tree. Overlying the extremities of this skeleton was another one, the trunk of which was directly under the tree, and the skull so surrounded and penetrated by its roots that it could not be removed. The belief is that the first body was buried long before the second, and that the marks of the grave had become obliterated, leading to the burial of another body directly over it. The tree which stood over these skeletons is estimated to have been at least three hundred years old. In other words, a forest had sprung up over this ancient burial place, at least as

long ago as the discovery of America by Columbus, and perhaps long before that event.

No human remains were found on or about the altar above referred to. The supposition is that this was a place for sacrifice, and that the offering of sacrifices constituted part of the burial rites. The altar was centrally situated, and may have been the place for the performance of the last sad offices over their dead, of a people who passed away before the beginning of the historic period.

CHARLES L. METZ.

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## CORRESPONDENCE.

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### THE VENETIAN MEDAL AGAIN.

*Mr. Editor.*—In your first number (pp. 43 et seq.), you inserted an article by me concerning a "Venetian Medal of 1685," which had been sold as old silver to a gunsmith, in Ottawa, Ills., and which, there was reason to think had been found in the earth, not far from Starved Rock,—the stronghold where the Italian Tonti held command for a score of years near the close of the seventeenth century. Some reasons were mentioned for thinking this medal had been brought to Illinois in the lifetime of that Tonti. My conjecture in that regard now seems to me more probable than it then appeared, for the two following reasons:

*First.* During an extensive European tour in the years 1878 and '79, I sought duplicates of my Venetian medal in a dozen national museums, but discovered them nowhere except in the British Museum, and in one of their collections. But the medal is of a peculiar type, as well as of rare beauty, and it commemorates a most noteworthy conquest. Every transatlantic museum would gladly possess it, and must have attempted to secure it. The absence of this Venetian medal in foreign collections is proof enough to me that no one in the present age could have obtained it in Europe for bringing to America. Then it must have been brought here at some former period.

*Secondly.* I am the more convinced that my medal came into the valley of the Mississippi in Tonti's time, because it is now established that some Italian medals were imported into Wisconsin at an era almost or quite as remote.

In May, 1878, Patrick McCabe, a railroad laborer of De Pere, —a station five miles from Green Bay, and so named in memory of the Jesuit fathers (*Des Peres*), whose mission there Tonti visited—while digging out gravel near where the United States Fort Howard was built, about 1815, turned up a singular old medal. It is one and one-fourth inches in diameter. It is

stamped on one side with the Blessed Virgin standing in the sun, and on the other with two angels kneeling in prayer beneath a cross on an orb inscribed I. H. S. The three nail heads are said to be the special cognizance of the Jesuits. But the point of more interest to me is the mint mark, which is the word ROMA, proving the medal to be of Italian origin.

A photograph of this finding has been sent me by the Catholic bishop of Green Bay, F. X. Krautbauer, who has also ascertained from the General of the Jesuits, that no such medal has been minted in Rome by the Jesuits since the restoration of their order in the year 1814. There is also ground to think that the medal came to Green Bay long before the abolition of the order in 1773. The mission there had been given up as early as 1729, and its flourishing period was in the last quarter of the previous century. It seems to me therefore most likely that the Jesuit medal may have been imported to the region where it has been so recently exhumed, by some of the very missionaries who, as they pushed on southward, were entertained by Tonti in his rocky eyrie on the Illinois, and then escorted by him to the Mississippi and far down it. May more medals show themselves, "time cohering with place and place with wishing," till my numismatic mystery shall be fully unfolded.

Madison, Wisconsin, Nov. 25, 1879.

JAMES D. BUTLER.

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*To the Editor of the American Antiquarian :*

Prof. Read's hypothesis with reference to the probable use of the tube, is, at least feasible. I have one however, which from the peculiarity of its construction, may have been used for the inhalation of snuff. At each end there is a semi-circular incision, representing when the implement is placed on end, a low arched opening. This reminds me of a practice among a certain tribe on the Amazon, described by Herndon, namely, that of inhaling, through a quill, a highly stimulating powder, remarkable in its results. I recently inspected an unfinished tube which to me is of much interest. The length is about 4 inches; diameter  $1\frac{1}{2}$  inch; form, a greatly elongated oval, perforated at one end  $1\frac{1}{2}$  inch. The form of the opening, which is abruptly tapering, and the circular striæ, clearly point to the chert drill as the implement used on this occasion. This object is symmetrical, but rough with pick marks.

I have for some time been engaged upon a descriptive and illustrated catalogue of the Archæological department of my cabinet, and send you herewith a description of a class of implements known as "gouges." The distinguishing characteristics of the typical form are as follows: Convex on one side and plain or slightly concave on the other; bit, prominently oval. Although

three inches is the usual length, they occasionally are found less than two inches. The convex side curves down gracefully to the edge of the bit, where it meets the bevel of the under side, forming thus a striking resemblance to a horse's hoof. Many of these forms are wrought out of soft shales, and, of course were not employed in the reduction of refractory substances. Moreover, there is a noticeable blending into the small uncreased axe, differing only in the more rounded form of the bit, and in having the edge less central, or more on one side, with a tendency from a curve to a straight line. It may be asserted that the highly polished bit, and perfect edge by which many of these implements are distinguished, are not the results of employment upon bodies of equal obduracy. Furthermore, the diminutive size of many of these objects renders the question exceedingly perplexing as to their practical application. Indeed, as you have truthfully stated, until we learn more with reference to the domestic habits of semi-civilized peoples, we must continue to grope our way through the fog of conjecture and the mist of hypothesis.

Alexandersville, O.

S. H. BRINKLEY.

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*To the Editor of the American Antiquarian :*

While residing near Nashville, Tenn., in the fall of '77, my attention was called to the so-called Indian mounds about five miles from Lebanon, a small town thirty miles from Nashville. At the first opportunity, I visited the mounds. I found that they were undoubtedly the work of the Mound Builders. The large mound, 70 x 90 feet on top, first meets one's eye. Its height is about 15 feet, with steep, sloping sides. Around this large mound, and scattered over an area of 10 or 12 acres, are numerous low mounds, ranging from a few inches to three feet in height. Surrounding the whole is a ditch, about three feet in depth, with occasional mounds, probably lookouts. About a week before my arrival, Prof. F. W. Putnam found an earthen pot with handles, then a beautiful water-cooler, which when washed, looked as fresh as though made but yesterday. I explored some graves or stone cists and found in one three marine shells. Inside of the large marine shells were small shell beads, pieces of carved shell, one being a thick fragment carved to represent a human face. At the opposite end from the pottery were two skulls, very much decayed, and hence could not be removed intact. The teeth showed them to be those of children.

Adrian, Michigan.

F. B. STEBBINS.

*To the Editor of the American Antiquarian :*

In regard to writing a paper about the ancient village sites of the Mohawk valley, I can say that the material is abundant and interesting, and is constantly increasing in my hands, as I study the subject, and make new explorations, and collect rare, curious, and unusual relics. As a sample of what I have found within the past few weeks in a couple of digging expeditions, I may mention, among a multitude of things comparatively common, such as arrow heads, knives, borers, scrapers, etc., a few rare things.

A rude carved bone idol, representing three human figures standing back to back, the carving is about three inches high.

A bone totem, a man's head, surmounted by some kind of an animal. This is rudely but strikingly carved in bone, the cutting of the flint knife being more distinct than I ever saw before.

A wonderful terra-cotta pipe bowl, which my wife dug up, representing a very artistically made human head, about three inches long.

I lately found one-half of a "polychrome bead," which Prof. Haldeman says is the largest he knows of in this country; also several other striped beads of a different pattern.

I find on two sites very many fragments of pottery, and, not infrequently, finely finished awls of bone, and deer horn implements, deeply buried in the kitchen refuse.

In a former letter I mentioned a find I made in Nov. last, in some very old graves, of a rare and curious lot of relics; they consist of stone tubes from  $4\frac{1}{2}$  to  $10\frac{1}{2}$  inches long, five stone knives or double pointed spear heads, a large number of beads, made from the column of some sea shell; some copper beads, and in one grave 189 arrow heads.

S. L. FREY.

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WAR PAINT—COPPER BEADS, ETC.

*To the Editor of the American Antiquarian :*

In the north-west part of Peoria county, in the State of Illinois, is quite an interesting group of mounds. They are scattered along the north bank of Spoon River, for a distance of five miles. There is one peculiarity that I have never seen noticed in other mounds, and that is that the "finds" are all deposited in "war paint," or red ochre. The first indication of a find in excavating is traces of this paint scattered through the clay. This "paint" is always thickest at the center, and so forms a guide to the "find." It is usually from 18 inches to 2 feet in diameter, and from  $\frac{1}{2}$  to 2 inches thick. I would like to know if this be common.


These mounds are 45 in number, mostly round burial mounds, about 40 feet in diameter, but one mound is a cross, shaped thus +, being 45 feet long, the cross being 33 feet long. The main shaft is 15 feet in diameter, and the cross piece 10 feet. The whole mound is about 2 feet high. There is also a well-defined fortification, with a large mound at the salient angle, which was rich in copper beads and awls, and flint arrow and spear points.

In one mound we found 33 skeletons, of all ages and both sexes. This mound was evidently built in a hurry, as it contained no evidence of any ceremonial. Not the slightest trace of paint, ashes, charcoal, trap rock, pottery or implements, which every other mound opened has shown something of. There was also an absence of hard pounded clay above the bodies which was never missed in any other mound. One mound was highly interesting, being beyond doubt a "cremation mound"—the only one I ever saw. Five bodies were burnt laid across one another in the form of a star, the skulls being to the S., S.-W., N.-W., N., and N.-E. At a point between the ear and point of the shoulders was a small jasper pebble, except the skull to the south. The heat of the fire had burnt the clay to brick red to the depth of 18 to 20 inches. The bones were all burnt from the middle of the pile, the head and shoulders alone remaining with a few fragments of charred bone.

We also found two camping places, or kitchenmiddens, one covering nearly five acres. From these kitchen mounds we have taken net sinkers, arrow and spear points, bones of all the wild birds and animals of the country, fragments of pottery, bone awls and implements of deer horn, stone fleshers, etc.

From one burial mound we took a "necklace" of copper beads, which had corroded into a water-tight tube, and preserved the thread inside. It is a spun fiber, doubled and twisted.

We also found in the "33 skeleton mound" a *humerus*, with the Simian perforation at the elbow articulation, spoken of in a late number of the *ANTIQUARIAN*.

I found in one mound an implement that to me is a riddle. It is a piece of semi-transparent quartz, shaped thus: . It is much like the common disc, only there is but half of it, and the edges are ground flat, like a grind-stone. The edges show all the work, the two sides being the natural water-worn pebble. There is another peculiarity of these mounds, and that is a total absence of axes of any description. Copper only as awls and beads; no mica; lead in the form of Galena ore only, and but rarely. Every stone found is broken, except a few very small pink quartz pebbles. The skeletons very much decayed. In most cases the spade will not as much as grit when passing

through the largest bones. All mounds are on steep bluffs facing south, with timber on the north, and a good spring near.

S. M. SHALLENBERGER.

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PENNSYLVANIA RELICS OF COPPER.

*To the Editor of the American Antiquarian:*

Prehistoric relics of copper are so rarely met with in that part of the country once inhabited by the Leni Lenape, or Delaware tribe of Indians, that a description of such as have come under my observation may be worthy of mention.

One of them was found near Millbach, Lebanon county, eastern Penn'a, by Mr. W. L. Illig, who showed it to the writer. As Mr. Illig collects specimens pertaining to stone only, this relic was at my instance deposited with the copper remains now on exhibition or belonging to the Smithsonian Institution, Washington, D. C., a fitting place for it. As before said, it is celt shaped, very much oxidized, somewhat irregular in form, measuring in length a fraction over two and one-quarter inches, width at cutting edge, which is rounded, two inches, and at butt end, one inch. Its greatest thickness is one-eighth of an inch, which is in the centre. Having the shape of our ungrooved axes, or celts, it was perhaps hafted and used as such, or it might have served as a scraper. A similar implement is figured by Col. Foster, in his "Prehistoric Races of the U. S.," page 253, fig. 52, b, who calls it an axe. The specimen was, perhaps, at one time as nicely wrought as was the one figured by Foster, but time has done much to mar its beauty, and its shape alone now tells what its object once was.

Copper is obtained distant from where the relic was found about fifteen miles, but not in nodules, as far as I am aware, large enough to produce specimens of this size, which fact proves that it was brought from a distance.

Dr. Chas. Rau, in the Smithsonian Report for 1872, "Ancient Aboriginal Trade in North America," page 354, mentions: "The occurrence of native copper in the United States is not confined to the shore of Lake Superior, as I am informed by Professor James D. Dana; it is also met in pieces of several pounds weight in the valley of the Connecticut river, and likewise in smaller pieces in the state of New Jersey, probably originating in both cases, from the red sandstone formation. The find being, as before said, an exceedingly rare one, for Professor S. F. Baird has written me that so far the National Museum contained this one only from this portion of the United States, mention should be made of it in the ANTIQUARIAN.

A. F. BERLIN.

# ORIENTAL DEPARTMENT.

## PALESTINE EXPLORATIONS.

BY REV. SELAH MERRILL, D.D.

Between Lake Tiberias and the Dead Sea there is, at present, but one bridge over the Jordan, and that is Jisr Mejamieh, about six miles south of the Sea of Gallilee. Just below this lake are the ruins of a once fine Roman bridge of ten arches, which was, no doubt, on the main route from Tiberias and Tarichæa to Gadara and the eastern cities and plains. On the Menadhireh, or ancient Hieromax, or Yarnuk (for the stream is known by all these names), which is the first tributary of the Jordan on the east, below the lake of Tiberias, there is a bridge of five arches situated only a few miles from the point where the two rivers unite. The next and only other bridge of which there is, at present, any trace, is one, now in ruins, at the Damieh ford, which was on the high-road from Nablûs, or ancient Shechem, to Gilead and the East. This bridge was originally Roman work, but there are evidences of extensive repairs by the Moslems, or Crusaders. On the east side the bank is quite low, and the wide flat at that point is often overflowed; hence it was necessary to build a causeway, which was done at great expense. I traced 450 feet of this causeway, or eastern approach, to the bridge, which was supported on arches, nine of which remain. The original length of this causeway was probably one hundred or more feet, greater than that indicated by the figures which I have just given. The foundation of the abutments at the eastern end are still perfect. The bridge itself, over the river must have been not far from one hundred feet in length. Formerly, there were ruined piers in the stream, and my Arab guides said they used to swim to them, but they have been washed down by floods and are no longer visible. The foundations on the western side have likewise disappeared. Roman civilization demanded the convenience and luxury of substantial roads and bridges, and when some civilized power again gets control of Syria and the Holy Land, we may expect that these conveniences for travel and commerce will be restored. At the present time, at Damieh, and also at Jericho, there are ferry-boats run by strong ropes, which are stretched across the river. Once in the Bible, when David returned from Mahanaim, a ferry-boat is mentioned for carrying across the household and goods of the King. (2 Sam. XIV, 19).

*Artificial Tels, or Mounds.* I wish also to call attention to the *tels* or mounds which exist in the Jordan valley, because, as some of them are wholly or in part artificial, they carry us back



to the Canaanites, or to the pre-canaanite period, and may help us in solving the problem of the site of the "cities on the plain" that were destroyed. These mounds appear in groups. There are some interesting ones around Lake Merom, on the Upper Jordan. Again, in the Succoth region, just north of the Jabbok, there is a second group; and, finally, on the Shittim plain, there is a third cluster, which deserves our careful study. Independent of any historical evidence on this point, I think my researches have established the fact that, with regard to the Jordan valley, the flat land was never occupied by cities and towns of importance, but that these were situated either in the foothills or upon natural or artificial mounds in the plain. In connection with the lowlands, cities are several times mentioned in the Bible as occupying *tels*; while in the valleys of the Tigris and Euphrates, a city presupposed a mound upon which it was built. There is a statement (Numbers XIII, 29) which shows that the Canaanites lived along the Jordan valley, and their occupation of it may have extended back into the remotest times. A decisive proof that these *tels* were the sites of cities or towns is the fact that several of those in the Lake Merom and the Jabbok groups have ancient ruins upon them; and further, all the mounds, without exception, on the Shittim plain are covered with ruins, and at least three of these we are able to identify with places which existed in the time of Joshua. Hence, it follows that if we are to look for the sites of ancient cities, no matter how ancient, in the Jordan valley, we must first of all examine the *tels*. One of these *tels* in the Succoth group bears the name of Der-'Alla; and Neubauer, in his "Geography of the Talmud," states that Succoth was called Ter-allah. These words are indetical, with the exception of the two initial letters, t and d, which often interchange. My opinion is, that we have a clue to the identification of the Succoth which is connected with the history of Jacob. From certain indications I suspect that cuttings into this mound would reveal ancient remains which, even if they did not consist of numerous objects of gold and silver, such as have rewarded Dr. Schliemann's excavations, might, nevertheless, be extremely important in elucidating the history and antiquities of this valley. Somewhere in this region were the brass foundries of King Solomon, where the metal work for the temple was cast, and as the same physical conditions exist now that existed in Solomon's time, it is not improbable that future researches and excavations may enable us to point out the exact locality where that work was done.

It may be well to notice the fact that, at certain points along the valley, there are slight elevations, which may be called *littoral mounds*; they are, however, not remarkable in any way,

and have no importance to deserve our notice. This fact is referred to because a certain critic of my work, who withholds his name, has stated that all the mounds in the valley were "*mere littoral mounds*." With all due respect, I must say that this critic writes without any adequate knowledge of the facts, and that the mounds of which I am speaking are, beyond dispute, wholly, or in part, artificial. My chief reasons for this opinion are: *first*, that in a few cases, where they have been cut into, ruins, walls, pottery and bricks have been found; *second*, columns, capitals, and fine squared stones project from the ground, suggesting the existence of buildings there in ancient times; *third*, supporting walls exist in few cases, formed of several tiers of great boulders or blocks of unhewn stone, which are four and five feet thick, eight and ten and even twelve feet long, and six feet wide; and in two or more cases, where the walls formed angles, there were foundations, apparently, for towers.

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## WAS THE JEWISH RELIGION ETHNICAL?

BY THE EDITOR.

The *Princeton Review*, for May, has an article upon Kuenen's work—The Religion of Israel—which is worthy of study. The author gives a general outline of Dr. Kuenen's conclusions, as follows: The children of Israel once resided in Egypt, and were polytheists. They had previously been fetichists and worshipped trees and stones. The first step to a purer faith was taken when Moses, who was a monotheist, during a period of wandering in the Sinaitic desert, called the tribal God Javeh, or Jehova, and imparted the ten words or the ten commandments to them, "thus connecting the religious idea with the moral light of the nation." It was in the days of the judges, when the tribes ceased to be nomadic and became agriculturists, that the second step in religious advance was taken. This ensued upon the rise of that astonishing type of character, the prophetic, which exercised such gigantic influence upon the entire subsequent history of Israel. To tribes disjointed and antagonistic, fighting to the death with the Canaanitish antagonistics, the prophets gave the cohesion of monarchy. They also established monotheism, for by gradual steps and reiterated teaching during centuries, they succeeded in erecting Jehovah—who had been since the days of Moses simply what Chemosh was to the Moabites, the patron god of the tribe—into the one supreme and only God. The further development of the religion of Israel was the result of the contest of the prophetic with the ecclesiastical order, prophets and priests, in the fell struggle for existence, furthering the survival of the fittest, as prophets and people had

previously done. In fact, says Dr. Kuenen, the Old Testament, critically regarded, acquaints us with three forms of the worship of Jehovah—the Jahvism of the people, who worshiped Jehovah as one in a plurality of gods, the monotheistic Jahvism of the prophets, and the Jahvism of the priests, whose worship was a ritual of compromise. In the early days of the existence of Israel as a nation, they possessed no sacred literature in any way resembling the modern Pentateuch. Jehovah was worshiped by the masses as a tribal god in the shape of a calf or young bull by sacrifices upon mountains or hills, the so-called groves or high places; indeed the tribal god was popularly regarded as a terrific god of light, whose messengers were fierce noonday heat and consuming fire; human sacrifices were made in his honor; in short, the current conception of Jehovah bordered on that of Moloch. It was the special merit of David, sensual and half barbaric as was his theology, to have transferred the ark of Jahveh to a settled abode in Jerusalem, and to have given official recognition to Jahvism as the religion of the nation. From such an act there was but a step, thinks our author, to the erection of that magnificent temple of Phœnician design as well as workmanship, which was the grand achievement of Solomon. Solomon, probably, also laid the foundation of a priesthood, and of those three high festivals which had already become a permanent institution in the seventh century before Christ. Thus, too, Solomon unconsciously originated a deviser and custodian of an increasingly diversified oral law. Nevertheless, in days neither of David nor Solomon was there, asserts Dr. Kuenen, any trace of that system of ritual known as Mosaism, nor a portion of the books of the Pentateuch which embody that system. The reign of Hezekiah was the date of its earliest appearance. Then the ten words of Moses and that small collection of private laws known in later times as the Book of the Covenant, was the only written code of religion and politics then extant. Seekers of pure religion set themselves to formulate their desires, to ascribe them to Moses, to commit them to writing, and to place them in the temple, where they were soon after *found* by the High Priest Hilkiah, as we *find* a letter which has been dropped into our letter-box. This first draft was still further elaborated by Ezekiel during the dreary days by the river Chebar, where, fully assured in his own mind of the certainty of a speedy return, he drew up what our author calls “a complete plan for the organization of the new Israel,” giving, in the first place a minute description of a new temple, appending, in the second place, a series of detailed precepts concerning religious worship, the staff of ministrants, and the rights and obligations of the Prince, and regulating, thirdly, the division of the land. It was during

the time of Ezra, between the years 458 and 444 B. C. that the final redaction of the law took place. In the recension of Ezra, the fabric of so-called Mosaism, may be regarded as practically completed.

This view of the Jewish religion is a new one, and in some respects we may acknowledge it to be true. There is in the Scriptures of the Old Testament a progress of thought and an historical sequence which are evident even to the superficial observer. The connection of this progress with the history of the world must also be recognized. If, too, there has been an ethnical development of religion among the races of the earth, there may have been also among the Jews. It is, however, this very point of the comparison of the Jewish religion, as an ethnical faith, with other religions, which is its strongest feature. If the Levitical system is the slow, natural outgrowth of the religious instincts of man, a survival of the fittest, a victor in the prolonged struggle for existence, then the religion of Judaism is certainly worthy of our admiration and confidence. We put other religions in the balance and find them wanting, but we find this outweighing all other systems, both in the minds of the intelligent and with the common people. There is nothing like it notwithstanding its deficiencies. Searched and criticised, tested and tried, throughout all the ages, it stands now, among the civilized people of the earth, a book of faith for the enlightened and of practice for all.

The genetic origin of Mosaism may be accepted, and as the supernatural gift of Deity it may be rejected; but if men will come to the solid truth as contained in these books, they will consider this same truth, at least, as of divine origin. As a work of history the Old Testament is one of the most remarkable books in existence. The esoteric evidence has been dwelt upon by writers for many years, but there is an exoteric evidence which, to some, is as forcible. It seems as if Dr. Kuenen, judging only from the contents of this review, had reached conclusions before the time. It is certainly unscientific and unscholarly for any one to jump at conclusions without first proving the premises. If there is absolute historical proof that the books of Moses were not composed (we do not say compiled) until the time of the captivity, 400 year B. C., and that then they were a fraud perpetrated by Jewish priests, who threw back their own knowledge and their own fabricated system into the earlier dates of history, then let it be presented. But, has it been proved?

## THE ANCIENT LAKE DWELLERS.

The Swiss explorations this year have furnished a large number of additional relics of the lake dwellers. The most important of these "finds" has been at Seeberg, in Canton Berne, on a small lake and adjoining peat-bog. The bulk of these remains consisted of the usual flint and bone implements, articles in wood and pottery. The pottery is very primitive, made entirely by hand, and baked before an open fire. Nevertheless, some of the specimens possess a certain rude shapeliness, sufficient to show that the designers or makers of them were not altogether destitute of artistic instinct. The lake dwellers were also basket-makers, and not unskilled in carpentry, one of the "finds" being a bent basket-handle, exactly like the those in use now,—and the hatchet handles are exceeding well made. One wooden instrument bears an almost startling likeness to the stock of a pistol, and might easily be converted into one; it probably served as the haft of a bone tool or weapon for boring or thrusting. Bone chisels were numerous, varying in size from four to ten centimeters long, and from one to two centimeters broad. Arrow heads of the same material were found, and the metatarsal bone of a stag, fashioned into a pair of forks, and evidently intended for use at a table. From the number of bone hair pins found amongst the flint tools and weapons of war, it is evident that they paid some attention to the adornment of their persons. The animal remains found on the turf moor are numerous. Among them are the bones of the dog, the badger, and the common otter. The latter were doubtless met with in the immediate neighborhood of the lake, but the presence of the bones of the wild ox and of the bear indicate that the lake dwellers were bold and skillful hunters, as well as ingenious tool-makers. They were also keepers of cattle, for the most numerous remains of animals brought to light were those of the common cow and the moor-cow.—*Selected.*

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## THE NORTH-EAST PASSAGE.

- One of the most important events of the last century is the complete navigation of the North-east passage, by the Swedish exploring steamer, *Vega*. Prof. Nordenskjold, who has been so successful with this expedition, is the same gentleman who, in 1872, originated and led the North Polar expedition; and Mr. Oscar Dickson, is the same "Merchant of Gottenburg," who then furnished the financial support. That expedition was under the direction of the Royal Swedish Academy, and had been in contemplation since 1861.

The history for the search of this North-east passage is a remarkable one. After America was discovered great efforts were made to find a passage to India, and many of the first voyages to this continent were to the North-west, seeking for it in that direction. In fact, the earliest maps of America have an open passage across the northern part of this continent, with imaginary vessels sailing through it. This was the idea also which ruled many of the explorers of the interior of America. It was in search of a passage to the South Sea that they traversed the chain of lakes and the rivers, far to the west.

The first to seek for the Indies by the North-east passage were the Russians. In 1553, Sir Hugh Willoughby was sent out by the Muscovy Company, to search for this passage in the North-east direction. He penetrated as far as the mouth of the Arzena, in Lapland, but here the gallant commander and his crew met the same fate which afterwards befell Sir John Franklin, as he and his men were found frozen to death in these desolate regions. The Dutch next took up the attempt, and William Barentz made three voyages in this direction, in 1594-96. Sir Henry Hudson undertook the North-east passage before he discovered the Hudson river or Hudson bay. He made two voyages in 1608, etc., but in the last gave up the attempt, and sailed Westward, and so discovered the bay which bears his name. Behrings, who had previously discovered Behrings' Straits, sailed from Kamschatka, in 1741, in search of the passage, but his vessels were wrecked, he himself died on Behrings' Island, and his crew escaped with a boat made from the wrecked vessel. Captain Cook's last voyage was made in this direction. He sailed through Behrings' Straits in 1778, but was not able to penetrate farther than longitude  $70^{\circ} 46'$ . He returned to the Sandwich Islands, where he was killed by the natives in the same year. The effort to discover the North-east passage was at last abandoned, and was not renewed until the present century. The passage does not seem to be so difficult as was imagined. Prof. Nordenkjold says: "I think the voyage from Europe to Asia, by Behrings' Straits, is certain and safe, with very little more experience of navigation in the Northern Seas. From Japan to the mouth of the Lena river there are no difficulties in the proper season for experienced sailors."

S. D. P.

#### AZTEC SIGNS FOR SPEECH.

The Smithsonian Institution has just issued a quarto pamphlet of 86 pages, by Dr. Habel, entitled "The Sculptures of Santa Lucia Cosumalhuapa." This site is near the city of Guatemala, capital of the province of the same name. Up to the discoveries mentioned in this account it was not believed that the Maya

or Aztec civilization extended south of the Sierras. The twenty-two figures, beautifully executed in heliotype, convince us that this is so far from the truth that the sculptors of Santa Lucia stand among the very first for beauty in designing and skill in executing. The same barbaric excess of ornament and the same brutality in religious observances characterize these sculptures that we see exhibited in those of the ancient Aztecs of Mexico. On the other hand, there are some symbols not hitherto observed on Mexican structures. The most notable of these are the signs for speech and emotion, if the author has rightly interpreted them. Nearly all the plates represent a priest or a layman adoring a deity, and offering human sacrifices. From the mouth of the adorer, or of the severed head, or even of the obsidian knife, emanates a vine-like ridge, grouped here and there with little knots, variously grouped. This speech sign ascends in a variety of curves, and frequently passes to the ear of the deity, who is enveloped in a great profusion of symbols, doubtless indicating his function. In a few of the slabs flame-like figures ascend from the waist of the adorer. Dr. Habel considers these as the expressions of emotion. In one of Stephens' drawings a similar flame issues from the mouth of a trumpet. If this be true, we do not know which to admire the more, the cleverness of the designer, or the ingenuity of the decipherer.

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#### NEW GUINEA.

This is the largest island on the globe. It was discovered in 1811. The peculiar race which inhabited this island were called Papuans, from the Malay word *papuwah*—woolly hair; so different from the straight hair of Eastern nations. This woolly haired race is found in widely separated lands, such as Tasmania, Feejee Islands, Southern Africa, the Phillipine islands and the Malay peninsula. Woolly hair, a Dolicocephalic head and chocolate brown skin are marks of the race. While successive incursions of lighter colored, smooth haired races have exterminated them elsewhere, they are found in New Guinea in their perfection.

"The Jewish feature," such as the aquiline arched or prominent nose of the Papuans has been recognized by many. The forehead is rather low and retreating, the mouth large, the lips full but not thick, giving sometimes an ugly look; but their features are in contrast with the prominent prognathic jaws, flat noses and thick lips of the African negroes. The appearance and dress of the inhabitants of New Guinea are remarkable. A dense mop of hair projecting six or eight inches from the skull, nose and ears pierced, with feathers or shells suspended from them, a naked body with a simple T band, or a shell, or a girdle

of fringe and possibly a necklace of teeth or shells, form the unique dress and adornment of men or women. If they wear any token or charm, it is a small carved wooden figure, or a tatoo on the skin. Their houses are built on piles in the water, or else on posts similarly set in the ground on the hills inland. Each house accommodates several families. A larger building in every village has posts covered with shapes of men and faces, and is a counsel house. The villages are like the pile villages of the stone age. The Papuans use pottery for cooking. Their weapons are spurs, wooden swords, bows and arrows, and clubs. They possess stone axes, made smooth and sharp by long grinding. With these they clear off forests and make fences. The people are agriculturists, but the bow and arrow are the distinctive weapons, being the ethnological feature which connects them with the ancient widespread people of the negroid type.—*A. R. Wallace, in Cornhill Magazine.*

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#### THE TEST OF LINGUISTIC AFFINITY.

BY ALBERT S. GATSCHET.

Resemblances of a fortuitous character have often been pointed out between languages of the Old World and languages of the New, but real affinity between linguistic families of the two hemispheres has never been scientifically proved. The childish supposition that the American Indians might be descendants of the lost ten tribes of Israel gave a lively start to inquiries of this character, and this impetus has not subsided yet. To search for affinities by mutually comparing the languages of *this* continent *only* shows more scientific understanding, and in several instances has led to important results. Several tribes living now at enormous distances from their parent stock have been proved to have separated from it at an early period, as the Apache and Návaro from the Tinné; the Tútelo from the Dakota; the Maipure from the Moxo; and the Huastec, near Vera Cruz, Mexico, seems to have been severed from its cognate idioms, the Maya, Tzendal, Quiché, etc., by an immigration of tribes of alien race. In the Eastern hemisphere we see the Malay dialect of Mozambique far distant from the other Malay-Polynesian idioms, and the same holds good for the Brahui idiom of the Belutches, which pertains to the great Dravidian stock of the Dekhan. All of these are separated from each other by linguistic areas spoken by quite different races of men.

The true method of testing two languages for their mutual affinity has often been discussed by linguists. Had their remarks been heeded, we would not constantly see the Aztec *teotl* *God* declared to be akin with Greek *theós* *God*. The investigation



is of a double character, for it extends over the *words* or the lexical part of the languages, and over their grammatic *forms*, inflections, etc., especially over the affixes.

1. The homonymous *words* showing a similar or related signification in both languages compared, must be carefully divided into loan words, borrowed from another nation; and in words, which apparently form part of a common stock. In many instances this discrimination is an easy one, in others very difficult, and then no decision can be arrived at without a great amount of ethnographic and historic knowledge, to which an intimate acquaintance with the phonetic peculiarities must associate itself. The discovery of loan words is of great importance for tracing ancient migrations, inter-tribal commerce, elements of culture and the progress of civilization. A nation borrowing no words from neighbors or foreigners, like the Iroquois, appears to the ethnologist in a very different light from tribes showing more receptiveness. On the other side, the homonymous terms which are not loan words and seem to have sprung from a common source, can be proven to be cognate only by etymologic analysis, viz: by proving that both have a common radix. This presupposes a thorough acquaintance with the family to which both belong, in several or in all of its dialects.

2. *Grammatic* affixes express relation, and are either prefixes to the radix, suffixes to it, or infixes inserted into the root. Affixes borrowed from other languages are sometimes met with, but this is rather exceptional. If two languages are cognate, a portion at least of all affixes will agree in both; the remoter the affinity, the more we shall see them altered according to the phonetic laws prevailing in the family and slight differences will be observed in their functions also; the stronger the affinity, the larger will be the number of the affixes coinciding. All affixes are roots, often ground down by wear and tear to simple vowels or consonants, and if from the most profoundly studied languages we can draw any inferences upon all tongues, all grammatic affixes serving to express relation consist of so-called pronominal roots, or radices of relation. Hence, if we wish to discover the full and more ancient form of these affixes, we have to look out for the (demonstrative) pronouns of the language.

The affixes serving for the *derivation* of verbs and nouns must be examined next and reduced to their simplest form, viz: to their radices. The roots of derivational affixes are roots of quality as well as radices of pronominal origin; many coincide with the grammatic (or inflectional) roots mentioned before.

3. After achieving these fundamental inquiries, we proceed to investigate and *compare* the position of the affixes before, in, or after the radix; the inflection of the nouns and verbs; the

position of the words in the sentence, and many other structural points of minor importance. All these comparisons must be made under the guidance of the *phonetic laws* traceable in both idioms to be compared.

After eliminating all the loan elements and scoring up the real affinities between the languages compared, we look at the radices obtained from words and signs of relation. A small amount of similar roots would not decide with us the question of affinity. Languages really akin to each other always show a considerable number of roots coinciding; not only of onomatopoeic roots, for some of them prove little only, but of roots of quality (called sometimes verbal roots) and especially of pronominal roots. Could we compare American languages in the shape they were spoken three thousand years ago, as we are enabled to do with Greek, Sanscrit, Chaldean, Egyptian, etc., this would facilitate our investigations enormously and give infinitely more certainty to our results; but as things stand now, we have to institute comparisons by uniting the material of all dialects of one family, and placing reliance on this historic basis, extend our comparisons from it to other idioms.

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#### THE ELEPHANTINE CAVE.

The Island of Elephantano is nearly a mile long, thickly covered with forest trees, principally of palms and tamarinds. The appearance of the island is singular, having two peaks, each several hundred feet high. The cave is located in the valley between the peaks, nearly half way up the hill, being about a half mile from the landing. Formerly the traveler was carried from the boat to the shore by the natives, the water being very shallow near the island, but now there is a little pier on which we landed and walked to the shore.

A cut-stone stairway leads up the hill to the Temple. The stairs are a stupendous work, and the steps are well worn by the feet of the millions of pilgrims and worshippers at these celebrated Cave Temples. The front of the Temple is open now, but there are indications that there was an entrance in which there may have been solid doors; but the early descriptions of this Temple are silent upon the subject. The place, with the surrounding scenery, is truly romantic. The magnificent tropical trees and brilliant wild vines all contribute to form a scene of peculiar interest. The Temple is about twenty feet high, and, being all open, is as light as day, and every part can be seen without the aid of artificial light. The great room in this Temple is one hundred and thirty-three feet by one hundred and thirty. There are several apartments, but all communicate

with each other. The rocky roof is sustained by immense fluted pillars with ornamental capitals, that somewhat resemble poppy plants of many designs, and all hewn out of the solid stone.

The principal piece of statuary is the Trimurti, or Trinity, which stands opposite the principal entrance. These colossal figures stand twelve feet high, and are at once grand and imposing. The three heads are supposed to represent the Hindoo Trinity. The most prominent head represents Brahma, the Creator of all things. The features are pleasing and calm, with an indication of serene repose. Vishnu upon one side has a mild and benignant expression. The figure has been injured and sadly mutilated. In one hand there is a lotus blossom.

On the other side there stands Shiva, with an expression so fierce, showing teeth so threatening, that he well represents the Destroyer. Shiva holds in one hand a cobra with expanded hood, and waiting for a chance to strike the blow that is sure to carry death to the victims. It was a sculptor of rare merit that designed and executed these heads in this hard rock. They are quite unlike, but you cannot fail to discover the design of the sculptor in making these figures. The same figures are repeated in different parts of these strange temples, and are so similar that you cannot fail to see the symbol, but none of the other statues are so impressive as the Trinity.

There are smaller rooms in this temple, the columns and walls of which have very curious sculptures. These curious figures have received adoration for many centuries, and until quite recently a large number of pilgrims and worshippers came hither to make their offerings, and to worship. While some of the figures in this Cave Temple are well executed and may claim merit as works of art, yet many of the statues here are, to say the least, crude symbols, and so very inferior that I cannot understand how anyone could have worshipped them, but they did. There is a stone, or statue, which is symbolic of the Lingam, which is the most ancient of all the Hindoo symbols. This one in past years was of very great repute, and considered quite efficacious as a cure for barrenness.

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#### THE POPULATION OF JERUSALEM DURING THE SIEGE OF TITUS.

Thomas Chaplin, M. D., long a resident of Jerusalem, has made, within a few years past, some study of the question of the population of Jerusalem during the siege by Titus, and his conclusions are very important and should be as widely circulated as possible.

It is difficult for those unacquainted with Oriental habits to believe that three millions of people could have been collected within the walls of ancient Jerusalem. Indeed one writer, Dr. Chaplin says, has characterized the statements of Josephus upon this point as "so childish that it is surprising any one could ever have repeated them," and has given "60,000 or 70,000" as the "extreme estimate" of the number of persons in the city when Titus came against it.

Dr. Chaplin thought that some definite knowledge might be arrived at by estimating the number of square yards to each person in the houses of the modern city. Measurements were accordingly made, in the Jewish quarter, of houses which would fairly represent the dwellings of the three classes of which the Jewish community is composed.

No. 1. The house of a very respectable family, that of a merchant, family consisting of nineteen persons. House had a ground floor, partly subterranean, a first floor with court yard, kitchen, etc., and an upper floor with two more chambers, a court yard, and a small kitchen. Building was quadrilateral,  $53\frac{1}{2}$  by  $19\frac{1}{2}$  feet, outside measurement, giving 54.8 feet to each inhabitant.

No. 2. House of a principal Rabbi who holds a high and influential position. His house was one of the best in the Jewish quarter, was  $34\frac{1}{2}$  by  $22\frac{1}{2}$  feet, outside measurement, and gave accommodations to sixteen persons,—48.5 square feet each.

No. 3. House in the poorest section of the quarter. Occupied by Polish and native Jews. In one room a tailor lived with his family and worked at his trade; in another a school for little boys was kept. The house had a court yard with staircase to the upper story, and a gallery running round three sides. It lodged 39 persons. Was  $59\frac{1}{2}$  by  $50\frac{1}{2}$  feet, outside measurement, giving 77 square feet to each inhabitant.

We have thus:

No. 1. 1,043 square feet, with 19 persons.

No. 2. 776 " " " 16 "

No. 3. 3,004 " " " 39 "

TOTAL,—4,823 square feet with 74 persons, or about seven square yards to each inhabitant. None of these people complain of over-crowding, and it is remarkable that the poorest have the largest space.

If the area of the city at the time of the great siege be taken as 3,500,000 square yards, and one-half be deducted for space occupied by streets, the Temple, Antonia the Xystus, the Synagogues, &c., we have left 1,750,000 square yards for dwellings, which, if populated only as thickly as the average Jewish houses of the present day, would have contained 250,000 persons, liv-

ing in comfort according to the requirements of Eastern habits. Dr. Chaplin thinks that in all probability the houses in the ancient city were several stories high, and further, that some of the streets are known to have been very narrow. Besides, there was a large influx of people from the neighboring towns and villages, coming there for refuge. And, moreover, Josephus never pretended that the immense influx of people at that time was not productive of great discomfort and eventually of great distress. Considering all these facts, he concludes that the statement of the Jewish historian may be nearer the truth than has sometimes been supposed.

S. M.

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#### A MONUMENT OF CYRUS THE GREAT.

Among the treasures recovered by Mr. Hormuzd Rassam during his recent explorations in Assyria and Babylonia is a cylinder belonging to King Cyrus, which Sir Henry C. Rawlinson describes as one of the most interesting historical records in the cuneiform character that has yet been brought to light. It is written in the Babylonian script, and was discovered among the ruins of Birs Nimroud, which without doubt corresponds to the ancient city of Borsippa. The cylinder is 9 inches long, by  $3\frac{1}{4}$  inches in diameter, and covered by 45 lines of text. The writing is very minute, and it is computed that the inscription would run to about 130 lines of average length. The monument has been considerably injured, and a few portions wholly lost. "When it does begin to be legible it is found to relate to the very moment of that great historical event, the capture of Babylon by the founder of the Persian Universal Monarchy. Nabonidus has abandoned his capital, which has fallen into the hands of Cyrus, though he is still struggling against his fate in Babylonia. But the priestly worshipers of the rising sun declare that the Gods have rejected him for his impiety and for his scandalous neglect of his temples. On the other hand, they extol the piety and the greatness and glory of Cyrus, whom the heavenly powers have raised up to avenge their cause."

Certain people are described as his subjects, whose name is taken to be equivalent to "Black-heads," reminding one of the negroes. Following the introduction is the text of a proclamation issued by Cyrus upon the taking of the city, in which the King speaks in the first person, "I am Cyrus," &c. Cyrus is made to speak of his reparation of the temples of Babylon, and of the favors conferred upon him by Merodach, Bel, and Nebo in answer to his prayers to them, of the homage paid to him by distant nations, and of the gatherings of the people in the city to proclaim him King.

Sir Henry Rawlinson says this new text settles forever, in favor of Herodotus as against Ctesias (in Diodorus), the genealogy of Cyrus. He was the fifth in descent from Achæmenes, next to whom came Teispes, then Cyrus the grandfather, and Cambyses the father of Cyrus the Great. Moreover the succession was direct, not indirect, as Prof. Oppert had maintained. The inscription styles the native country of the Persians "Assan," which Sir Henry Rawlinson gave reasons for locating in the plains between the modern Shuster and the Persis of the classical writers. An important religious centre named *Calana* in the inscription was illustrated by reference to the Calneh of Genesis and the Calus of Isaiah. The text with full translation will soon be published.

One such important record as that now brought to light awakens an eager desire among scholars to have all the mounds which line the Tigris and the Euphrates thoroughly examined.

S. M.

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#### DESTRUCTION OF ANCIENT MONUMENTS.

One of the most deplorable facts connected with the East, is the destruction of ancient monuments. Marble statues, columns, capitals of exquisite workmanship, and various other works of art, such as exist in ruined cities, are being collected by the natives and burned into lime. Mr. Wood testifies to this fact at Ephesus, and Mr. F. W. Percival states that: "The Temple of Cybele at Sardis has never been excavated, and the soil has accumulated above the pavement, to a depth of at least twenty-five feet; but, even this is not sufficient to preserve it, for I found when I was there that a quarry had been dug on the north side, and that splendid blocks of marble were being broken up into small pieces to burn in the neighboring limekilns." Of the Temple of Diana at Tekeh (Magnesia ad Mæandrum), he says: "The walls of the peribolus are standing to a height of about twenty feet, and they have hitherto been the most perfect of their kind existing, but I fear that they will soon disappear altogether, for I saw a number of men employed in pulling them down and carting away the stones for building purposes.

There is no apparent remedy for this, and in fact it is no new thing, for this matter of borrowing building materials has gone on for centuries. This system of stealing, also the practice of burning into lime, has been carried to a great extent in Palestine.

Some old ruins have been drawn upon by neighboring and modern towns to such an extent, that almost nothing is left of them. The explorer may be certain he is standing on the site of some ancient and famous city, but it is a matter of wonder to

him what has become of it. At the north end of the plain of Gennesareth, there is an important buried town. It is near Khan Minieh, and in our judgment, is Capernaum. The walls where we ourselves saw them exposed, were built of fine blocks of stone, and the whole structure appeared to be of superior workmanship; but these walls are rapidly being dug up by the natives and converted into lime. Facts like these, of which numerous illustrations could be given, ought to stimulate societies and individuals to press the matter of researches in all parts of the East with all possible diligence, in order to rescue the valuable archæological and other ancient treasures which still remain.

S. M.

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#### THE ORIGINAL SEAT OF THE PHŒNICIANS.

Prof. Julius Oppert claims to have made a discovery in connection with an island which the cuneiform records mention as situated in the Persian Gulf. In Sumerian characters the name reads *Nitukki*, which may signify "original land." The scholar just mentioned formerly pronounced it *Dilmun*, but recently he finds reasons for changing his view and reading *Tilvun*, which he identifies with Tylos of the Greeks. This is mentioned by Theophrastus, Arrian, and by Pliny. It has long since been recognized in the modern *Samak-Bahreïn*, the largest island of the small archipelago of Bahrein. It was celebrated for cotton and pearl fisheries, and the Chaldean legends claim that in this place many prominent divinities lived or had their origin. This place, with one or more adjacent islands, has been regarded as the original home of the Phœnicians. Strabo locates them here. If Prof. Oppert's reading and identification are correct, the fact will be an important corroboration of the testimony of the Greek writers.

S. M.

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#### MUSEUMS OF PREHISTORIC ANTIQUITIES.

In an address delivered before the annual meeting of the German Society for Anthropology, etc., at Kiel, Prof. T. Ranke mentions the fact that Mr. Steeven, of Salisbury, England, had made a donation of £15,000 for establishing a museum of prehistoric antiquities in that city; that in 1874 a citizen of Kiew, Russia, gave 30,000 roubles for a similar purpose, and that in years previous to 1878 the Belgian Government spent 40,000 francs in the scientific investigation of prehistoric caves. Paris is in possession of a college and laboratory for anthropology, and in 1880 an exhibition of anthropologic specimens will be opened at Tiflis, south of the Caucasus. And how much, we would like to know, has been done in that respect in the United States of America?

A. S. G.

## LINGUISTIC NOTES.

EDITED BY ALBERT S. GATSCHE, WASHINGTON, D. C.

**MASKOKI.** Tribal names for *large* Indian communities are not frequent in the United States of America; Maskōki is one of them, and the linguistic origin of this name and that of Chá'hta has not been shown yet. It is the appellation given to the Creeks, who anciently divided themselves in Upper Creeks (on Alabama River and tributaries), and in Lower Creeks (on Chatahutchi River). The whites called them *Creeks* on account of their location on the creeks of the Gulf coast, Indians always settling on rivers (or open waters). In the 18th century Maskōki is constantly written Muscogee or Muskogee, the *g* being guttural and not palatal; that it was written Muscogee and not Mascogee, as it is pronounced by the Indians, is not to be wondered at, for the English language, with its surd, indistinct and imperfect vocalization, will convert the clearest *a* into a *u*. It may seem unjustifiable to consider Maskōki as the *national* name of the community, for we never hear the old Creek confederacy called the Maskōki confederacy. Neither Creeks nor Hitchiti can explain this name, though the second part, *oki*, seems to be the Hitchiti *oki*, *water*, which still appears in many local names belonging to that Maskōki dialect: Okēlākni, yellow water; Okifenōke, wavering waters; Ocmūlgi, bubbling water; Okitchōbi, large river, and in Oconee River. The Creek term for *water* is *wiwa*, *o-iwa*; for *river*, *hatchi*; for *swamp*, *opilua*, *apilua*; (hence the town name *Opelika*.) Analogy will induce us to seek in the term *Creek* an interpretation of the Indian name; but since the dialects of the Maskōki group ignore such a word as Maskōki, we must seek for it in other languages. The Shawnees call a Creek man *Humásko*, the Creek nation or people *Humaskōgi*. Here the *hu-* is the predicative prefix: "*he is, she is, they are,*" and appears often as *ho-*, *hui-*, *ku-*. Thus *humaskōgi* means: "*they are Masko,*" the suffix *-gi* being the plural ending of the animate order of substantives. No Shawnee, Delaware or other southern Algonkin dictionary was ever printed which could inform us of the meaning of *masko*. But Rev. Lacombe's Dictionary of the cognate *Cree* or *Knisteno* (Canada) gives: *maskek*, marsh, swamp, trembling ground unsafe to walk upon; *Maskeko-wiyiniw*, the *Maskegons* or *Bogmen*, a tribe of *Crees*, also called *Maskekowok*. Rev. Watkins' *Cree Dictionary* has: *muskāg*, *muskāk*, swamp, marsh; *Muskāgoo*, Swampy Indian; *Muskāgoowew*, he is a Swampy Indian. These *Muskegons* are said to have been formerly *Odshibwē* Indians, who have left Lake Superior and joined the *Crees*. Bishop Baraga's Dictionary of *Odshibwē* (Cincin., 1853), has *máshkig*, plural *maskigon*, swamp, marsh; *Mashki sibi*, Bad River (correct form: *Mashkigi sibi*, lit. "Swamp



River.") Rev. Eng. Vetromile's manuscript Dictionary of *Abnáki* has: *meguä'k*, fresh water marsh; *maskehegat*, fetid water. The *Shawnee* word for creek, brook, branch of river, is *methtékui*; since Shawnee often has the *th* where the northern Algonkin dialects have *s*, the syllable *meth-* may be connected with *maskek* of Cree. Cf. *thipi*, *river*, in Shawnee; *sibi*, in *Odshibwë*; *sibe*, in *Potewátëmi* and *Sauk*. Caleb Atwater's Shawnee vocabulary (Archæol. Amer., Vol. I., p. 290) has: *miskegue*, *pond*; *miskekopke*, *wet ground*, *swamp*. I have adduced all these terms to render the derivation of *Masköki* from a Shawnee term *probable* only, and its signification of "*Marshmen*," "*Swampmen*," or, perhaps, "*Creekmen*," less hypothetical. The country of the *Chá'hta* and *Chikasa* also was a succession of swamps, low grounds and marshes. The proposed derivation would account for the tradition of the *Hitchiti*, that they originated by coming out of a canebrake. The name *Hitchiti* is commonly derived from the Creek word *ahitchida*, "to look up the stream," which stream was *Flint River*, which the Creeks call *Thlonotiska* (*thlónoto*, *flint*.) Should my derivation prove correct, the orthography *Maskögi* would be just as correct as *Masköki*.

Many Shawnees lived among the Creeks when they held the territories of the present Gulf States, and the colonies on the Atlantic seaboard could obtain the term *Masköki* from none better than from these southern (*sáwano*, *south*) Algonkins. The name of an Upper Creek town, *Taskígi*, has not been explained up to this day, and, having a similar ending, may be traced to a similar source. The national legend of the *Masköki*, as preserved by von Reck, and republished by D. G. Brinton, does not yet call by a national name the Creek tribes, whose early historic traditions it transmits, and even much later, only town and tribal names seem to have existed, as *Kúsa*, *Kasi'hta*, *Obika*, *Wetúmka*, *Ka-usáti*, *Kowita*. The only *comprehensive* names which large Indian communities give to themselves are those which mean *men*, *people*. They may appear under the form of an adjective or participle: *Dakota*, "the allied." All others are given to them by other Indians or white colonists, and only the names of tribes or bands, that is, of smaller communities, are sometimes traceable to the people itself, and most generally to the locality which it inhabits.

**BIMINI.** A poetic object figuring in the history of the discovery of the New World was *the fountain of Bimini*, situated on an island of the same name, hundreds of leagues north of Hispaniola. This fountain or source had the power of restoring youth and of giving perpetual health and vigor to the sick and decrepit; such was the firm belief of all the Indians

of the Antilles, and even of the mainland of Central America. This fountain was probably one of the causes which prompted Ponce de Leon and Hernando de Soto to undertake their expeditions to Florida, for it was most generally supposed to be situated on the outskirts of this peninsula. Worship of sources and fountains is very common among all nations, but here we have a combination of this worship with the myth of an earthly paradise or "island of the happy." The name was variously pronounced, but when we adopt *Bimini* as the current form, this is composed of the two Timucua words: ibine, *water*, and mine, mini, which means (1) *great*, (2) *high*, and (3) *first*, prominent, superior; the second signification has also become a substantive, hill, mountain. Hence Bimini is a contraction of ibine and mine, mini, "water of superior quality." But the Timucua language, spoken along the eastern coast of Florida, was not the only idiom which furnished a name to the far-famed island and its fountain; they were known also by the Carib name Boiuca, a term easily identified with boyaicou, *magician, sorcerer, conjurer, shaman* (Raymond Breton, Dictionn. caraïbe-français, Auxerre, 1665; page 83); occurring also on the northern seaboard of South America in a hundred various forms (piaces, piajes, piacé, pajé, paggi, payé, etc.)

A COURSE for studying the language of Chinese officials (or MANDARIN language) has been opened in Harvard University, Cambridge, Mass., on Oct. 22. This class is open to any competent person, and the lessons are given daily. The Chinese who come to America are almost all from the southern provinces of the empire, and do not understand this official idiom, which has its origin in the north and is understood in the more northerly ports, as Shanghai, Tientsin, Chefoo. The Mandarin language is the written language of China and the vehicle of Chinese literature, and the course at Harvard will therefore be available for the following persons: 1. Students wishing to acquaint themselves at first hand with Chinese history and literature. 2. Persons proposing to fit themselves for consular service in China, or for otherwise transacting business with Chinese officials, all of whom speak this idiom, whatever the local dialect may be.

Not very long ago the *Vicomte of Porto-Seguro* published a book on the Turanian origin and affinity of the *Brazilian Tupis*,\* by which he claims to prove the Asiatic origin of these Brazilian savages and their congeners, the Caribs and Guarani, by the comparative method of linguistics and ethnology. He has searched all the languages of the Orient and Europe to find a satisfactory clue for the origin of the Tupi, and finally found

\*Le Vicomte de Porto-Seguro: L'Origine Touranienne des Américains Tupis-Caribes et des Anciens Egyptiens. Vienne, 1876, 8vo., 155 pages.

it in the easternmost of the Uralo-Altaic dialects of Siberia. All his linguistic facts are advanced only hypothetically and with caution, and it is very well for him to do so. The Ostiak Mongols had many Tupi words (page 142), for he finds that the Ostiak *kura canoe*, *birá river*, *aká, yeká or takai head*, *guma black*, *tsanga black* are the Tupi *igára, pará, akan, una, tinga*. The ancient Egyptians and the Carians of Asia Minor are to him Turanians also, and the latter, bold navigators and following in the wake of the Phoenicians, crossed the Atlantic several centuries before our era to establish colonies among the Tupis in Brazil. Thus he explains how the Egyptian To-Pan "the Pan of the home country," the Typhon of the Greeks, became the Tupan or God of Thunder in Brazil, and why the Tupi call themselves Cary-ós (progeny of the Carys) and the Galibi of the northern coast of South America Caribs or Cara-ibs. The only article of real value in this book is the seventh chapter, which contains a short extract of the Tupi grammar, taken from the early authors on the subject.

THE LITHUANIAN and the Lettic languages form a group of idioms spoken on the border of Russia and North-eastern Prussia. Of the former no earlier monuments exist than what was left us from the sixteenth century, and since then the German, Polish and Russian languages have constantly gained upon the area of this curious idiom, in which the vowels have preserved as original a form as in the cognate Sanscrit. A third idiom belonging to this group, the old Prussian, has disappeared in the seventeenth or early in the eighteenth century, and the days of the Lithuanian appear to be counted also, like those of some of our Indian languages. A circular has therefore been issued, inviting linguists, ethnologists and historians to aid in the preservation of Lithuanian, by continuing Aug. Schleicher's work of collecting the myths, popular tales, songs and melodies, traditions, ethnologic peculiarities, etc., of this interesting people, and publishing them in book form. To Prof. Voelkel, in Tilsit, all communications are to be addressed. The committee, which held its first session on the 14th of October, in Tilsit, is composed of well known men of science, as Mannhardt, Miklosich, Nesselmann, Aug. Pott.

THE *orthography* of local names on the maps of EAST INDIA needs reform, and England makes an attempt to reform it authoritatively. The phonetic spelling of the early English soldiers and adventurers and of the modern scholars have made the confusion complete. To disentangle and rectify this babel of names taken from a hundred or more dialects, is a task as interesting as difficult. Who will undertake it for our Indian geographical names, which are written just as incorrectly?

## ARCHÆOLOGIC NOTES.

We have recently recorded the publication of an article by the Rev. Ed. Slafter on copper implements of Indian manufacture mentioned by authors of the 17th century. Soon after another learned article on a related subject appeared in the "Proceedings of American Antiquarian Society, April 30, 1879," the full title of which is as follows: *Philipp J. J. Valentini, Ph. D., Mexican Copper Tools: The Use of Copper by the Mexicans Before the Conquest*. [From the German, by Stephen Salisbury, Jr.] Worcester, Mass. Press of Chas. Hamilton, 1879. 8°, *illustrated*, 41 pages. In comparing the uses made by the Aztecs of copper products with those of northern Indians, as shown in a paper by Prof. Th. Egleston on Prehistoric Copper Mining at Lake Superior, it appeared "that both races were unacquainted with iron; both were trained to the practice of war, and, strange to say, both had invariably abstained from shaping copper into any implement of war. But the native of Central America possessed copper implements for tilling the fields, and knew the uses of the chisel. The skilled workman of Tecatega and Tezcuco, subjecting the native copper to the heat of the furnace, cast the woodcutter's axe in a *mould*, as well as the bracelets and the fragile earrings that adorned the princesses of Montezuma; but the northern Indian simply took a stone, and by physical force hammered the metal into the required shape." The information on the use of metals in early Mexico to be derived from the Spanish authors who wrote within a century after the Conquest is rather scanty; but the Aztec pictorial manuscripts of the Kingsborough collection furnish an instructive series of pictures, which Dr. Valentini has exhaustively consulted in his able and interesting article on copper implements in use among the Aztecs and Central Americans.

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## EDITORIAL.

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## THE ORIENTAL DEPARTMENT.

We are happy to give to our readers the valuable contributions to archæology by our coadjutor, Prof. Merrill. Having been connected with the Palestine exploration survey, he is fully competent to give descriptions both of the geography and archæology of Palestine, especially that portion lying east of the Jordan. From his access to libraries and his extensive acquaintance he is also able to continue to give the results of the latest researches in this department. Rev. Drs. Crosby, Strong and Abbott, whose names we give by permission, were also all of them connected with the same American Palestine Exploration

Society, which has now become extinct, and will hereafter give to the ANTIQUARIAN, as opportunity and time permits, the results of their ripe scholarship. Rev. T. O. Paine is not so well known, but we are sure that his acquaintance with Egyptology is such as to make his contributions of great value. Rev. A. H. Sayce does not need any introduction. He is acknowledged to be the best Assyriologist in the world. We consider ourselves very fortunate in securing his coöperation, and, what is more, he promises to do all in his power to make the Oriental Department a success. We have no doubt that our readers will consider our *new department* as a great improvement, and we hope that they will take the pains to introduce the magazine as now containing matters which will interest all classes, as well as those who are specialists in American archæology. We would say that our circulation in this country has from the outset been largely among libraries (Astor, Boston, and Smithsonian), historical and scientific societies, and professional men, but that we are now receiving orders from various libraries in Europe, such as the Bodleian at Oxford, and from various societies, such as the "Congres de Americanistes" and others. The contributions to our pages are read by the most intelligent circles in the world. We believe that by widening our scope we shall not only secure a greater number of readers in our own land, but that we shall also secure the contributions of many of the scholars of Europe, many of whom are well versed in American archæology, but from modesty have thus far declined to write upon topics so remote from their own field of observation.

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#### IN MEMORIAM.

We are sorry to record the death of Prof. B. F. Mudge, of Manhattan, Kansas, one of the most indefatigable workers in all departments of science. He had lately created an enthusiasm in the department of archæology which had extended throughout the whole State in which he resided. He was a member of the American Association for the Advancement of Science, and the founder and first President of the Kansas Academy of Science. In 1863 he was State Geologist; in 1865 was elected Professor of Geology in the State Agricultural College, but since 1874 had been engaged in exploring the geological formation of Western Kansas, in the employ of Prof. Marsh, as field geologist of Yale College. Science loses a good worker and society a good man.

We regret to learn the sudden death of Mrs. Stephen Bowers, who, with her husband, had been so efficient in investigating the archæology of southern California. She died at Santa Barbara.

The two were on the eve of departure for an exploring expedition to the islands adjacent, when she was suddenly taken. Mr. Bowers has since removed from that place, and is now a resident of Garnett, Kansas.

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### NEOLITHIC IMPLEMENTS FOUND IN GRAVEL BEDS IN CALIFORNIA.

Prof. Whitney's reports on the auriferous gravels of the Sierra Nevada, published by the Museum of Comparative Zoölogy, describe numerous implements which have been discovered in the gravel. The list comprises (1.) A mortar found in pay gravel underneath the volcanic 150 feet,—locality San Andreas, Colorado Co., Cal.,—date, 1860 and 1869. (2.) A stone hatchet, triangular in shape, size four inches around, six inches long, *with a hole through it for a handle*, found 75 feet from the surface in gravel, and under basalt, 300 feet from mouth of tunnel, locality Table Mountain, Tuolumne Co., finder, James Carvin, date, 1858. (3.) A large number of mortars, pestles, *stone dishes*, with bones of mastodon and elephant in auriferous gravel, 10 to 20 feet below surface, locality, "Murphy," Tuolumne Co., Cal. (4.) Mortars, some of them weighing from 20 to 40 lbs. "in gravels" 40 feet deep, locality, Amodor Co., date, 1852, 1857, 1858 and 1864, now in Voy's collection. (5.) Stone mortars, one ten inches high and six in diameter, found at ten feet depth, others at a depth of 100 feet. (6.) Bones of a human skeleton, found in clay 38 feet below surface, finder, H. H. Boyce, M. D., 1853, Placerville. (7.) Oval stones with grooves around them lengthwise, implements used as handles for bows, hollow on one side and convex on the other, 5 or 6 inches long, one inch thick, locality, El Dorado Co. (8.) Large stone platters and a mortar made of granite, 15 inches high, and 12 inches in circumference; depth, 10 to 20 feet; also, a platter of granite 18 inches in diameter, locality, Placer Co. (9.) Numerous stone relics, mortars, pestles, and grooved disks at various depths; locality, Nevada Co. (10.) A stone mortar standing upright with pestle in it, apparently as it was left by the owner. Other mortars from half a dozen to a dozen or two, enough to show a large population; depth, 12 feet underneath undisturbed gravel, also several mortars on the top of blue gravel, and another in blue gravel, 40 feet below the surface; finder, Amos Bowman, dates from 1853 to 1858. We have no opinion to express as to the antiquity or geological history of these relics, but our readers will notice certain points in the description which show that they are *neolithic* and not *Paleolithic*, and any inference as to their being signs of a "missing link" in the tertiary age is far fetched and unwarranted.

## BOOK REVIEWS.

*Tanagra Figurines.* Houghton, Osgood & Co., Boston, 1879. Certain excavations in Northern Greece have within a few years brought to light some curious specimens of ancient art. Among these are certain painted images or statuettes, which are here called Tanagra Figurines; Tanagra was an ancient Hellenic city in Boëtia. In opposition to the common usage of the Greeks, the Boëotians were Tomb Builders. The Figurines were taken from sepulchres, and are among the most ancient works of art. The book contains a number of photographs which give a view of their artistic finish, and of their beauty, which is very gratifying. The author has also written a very readable description of the archæological discovery, and furnished much interesting information. The book is published in a neat and attractive style.

*The Native Races of the Pacific States*, by Hubert H. Bancroft, Vol. 1. *Wild Tribes*, New York: D. Appleton & Co., 1875. Although this work has been published four years, we are happy to call attention to it again. It is a standard work, and fortunately was prepared just at the right time. The native races of the Pacific coast are fast losing their original peculiarities, and the material which would give information about them must soon perish. The ethnologists of this district should save the facts which are needed. It is remarkable that one man should be raised up to accomplish this task. It took the combined labors of the Jesuit and Protestant missionaries, the early historians and geographers, and many travellers in their day to record the character and peculiarities of the native tribes of the Atlantic coast, and the work is still unfinished. These tribes have disappeared and are now known only by the slow process of archæological investigation, or by the study of their tongues, which may be regarded now almost as dead languages, or by the study of a vast multitude of books. This work, however, gives to us a cyclopedia of facts about the races of the Pacific coast, which is very valuable. Mr. Bancroft has had unusual advantages for gathering information, having accumulated a fortune upon the Pacific coast, and at a very opportune time purchasing a large library of books which are now difficult to get, and at the same time being familiar with the ethnographical features of the country which he is describing. The wild tribes of the Pacific coast are divided as follows: 1. Hyperboreans, including the Esquimaux, Aleuts, Thlinkets, and Tinneh Indians. 2. Columbians, including Nootkas, Chinooks, Sahaptins, Salish, and other tribes. 3. Californians, including Klamaths, Modocs, Shastas, Eurocs, Cahrocs, Hoopahs, Shoshones, Washoes, the Pelutamas, and many other tribes. 4. New Mexicans, including

Apaches, Comanches, Yumas, Navajoes, Mojaves, Moquis, Pimas, and many others. 5. The wild tribes of Mexico, including the Aztecs, the Miztecs, the Huaztecs, the Mazatecs, the Chiuantics, the Chiapanecs, the Pimas, etc. 6. Wild tribes of Central America, including the Mosquitoes of Honduras, the Maya-Quiché, and the inhabitants of Yucatan, Nicaragua, San Salvador and Honduras.

This division of the tribes is largely geographical. As to the origin or affinities of these races there might be a diversity of opinion, and further study may be necessary, but we have no doubt that the outlines are generally correct. The location of the Pacific tribes at the opening of history may be understood from this book, but the migrations are still to be studied. There is no doubt that these migrations followed the geographical features. The long valleys which extend the whole distance of the Pacific coast, and between the different ranges of mountains, and the various rivers which flow either into the Pacific or Gulf of Mexico, some of them extending for thousands of miles and traversing two zones in their course over the natural channels through which the successive races would flow. This is on the supposition that this continent was peopled from the Asiatic coast, and by the way of the Behring Straits. The cross-fertilizing of the races of this continent is more difficult to trace. Whatever evidence there is of a migration from the Pacific, by way of Polynesia, has not yet been thoroughly discovered.

*Geology of Wisconsin, Survey of 1873-77. Vol. II. Published under the Direction of the Chief Geologist, 1878.* This volume contains the annual reports for 1873-74, by I. A. Lapham, for 1875 by O. W. Wight, the geology of Eastern Wisconsin by T. C. Chamberlain, the geology of Central Wisconsin by Roland D. Irving, and the geology of the Lead Region by Moses Strong. It is a superb work. The mechanical execution of the book is a delight in itself, and the contents correspond. Prof. Chamberlain has done a grand good work, both for Wisconsin and the scientific world. His analysis of the quarternary formations of Eastern Wisconsin is delightful. These confused and heterogenous heaps of drift are not easy to understand. If anything is accidental in geology, we should say these were, but the Professor has brought order out of the confusion, and shown a wonderful system to them. These hills and valleys which so border the great lake and divide the streams of this territory only show more clearly what great forces were at work during the ice age. These streams now flow from the opposite sides of the narrow moraines, but in their ultimate course reach the widely separated destinations in the Gulfs of Mexico and St. Lawrence. The evidence is, however, brought out that these



kettle moraines are only the work of the great glacier which rested upon the whole northern half of this continent, and that once the drainage of this whole region was in only one direction, and that to the southward. As there are valleys in Ohio which connect the head-waters of streams which now run in opposite directions, showing where the great glacier was drained, so here these kettle moraines are traversed by channels which also present the same phenomenon. These moraines are supposed to belong to the formation preceding the terrace or champlain epoch, and yet the two formations, like different stages of the same great era, are evidently connected. No one can properly understand the physical formation of this continent without a study of them. They extend from the Atlantic coast in the neighborhood of New Jersey across New York, Pennsylvania, Ohio, into Wisconsin and Minnesota, and generally form the watershed between the two great systems of rivers which flow in opposite directions throughout the Mississippi Valley. Prof. Upham is now exploring this formation in Minnesota. Doubtless when the study of these moraines is completed we shall understand more of the glacial period. Few traces of man have been found in them. However confident others may be, we are not ready to assume any more than can be proved in reference to his preglacial existence. If, however, we would understand the organic unity, and properly learn how the earth was formed for man's abode, we shall need to study its geologic history, especially as connected with this latest formation.

*Foot-Prints of the Vanished Races in the Mississippi Valley*, by A. J. Conant, A. M. St. Louis: Chauncy R. Barns, 1879. We do not know as the American mind will become aroused to the importance of studying the wonderful things contained on this continent, but it is probable that the appearance of a few more volumes upon local archæology will convince intelligent minds that there is something worth studying. The field occupied by this author is entirely new, and the facts brought out are, on this account, more valuable. Curiosity alone should induce people to read this book. This volume comes in the form of a thin quarto, an unusual form for the archæologist's collection, and would have been better if it could have been in the octavo form. We are glad to see the cuts, for they are a pretty good advertisement in themselves. We are convinced, however, that quite a number of so-called archæologists in this country collect relics but do not read books. We are glad to commend this work to the attention of such, for they possibly may learn something by reading it. We do not think that the scientific basis has been reached, but as the facts accumulate a system may grow, and so archæology gradually take its place

among the popular sciences. We are trying to do something in our humble way to advance this science, and we welcome any book on the subject, and especially a book which treats of the archæology of Missouri, a region which has been so little known heretofore.

**THE PALENQUE TABLET.** *In the United States National Museum, Washington, D. C., by Charles Rau, Published by the Smithsonian, 1879.* In the year 1842 Mr. Charles Russell, U. S. Consul at Taguma, State of Campeche, Mexico, presented to the National Institute the fragments of a tablet from the ruins of Palenque, which have attracted considerable attention both before their removal and since their arrival at Washington. A description of the tablet had already been given by the explorer Stephens, and the drawings of the artist Catherwood had made it somewhat familiar to American readers, but the description lacked completeness and accuracy and the tablet also was without explanation. This deficiency has, however, after so long a time been made good by the critical and careful description given by Dr. Rau, and by the accurate drawings and photographs contained in this volume. Not only is a complete history of the discovery of the tablet given but a careful analysis of the different parts is also presented. The tablet contains, among other things, the figure of a cross surmounted by a nondescript bird and that of the priest offering a child, probably as a sacrifice; also, the different hieroglyphic characters are here drawn in separate engravings, and described by the author. It is also followed by a discussion of the origin of the cross, and the general character of Mexican hieroglyphics. The author takes the position held by Inman, in opposition to that held by Dr. Brinton, that it was originally a Phallic symbol, and neither of historic nor Christian origin. The author also gives descriptions of the hieroglyphic characters of the Mexicans, and the manuscripts in which they are found, but does not undertake to decipher them, and, in fact, indicates that all attempts have thus far proved failures. The book is creditable to the scholarship and critical skill of the author, and is an admirable publication.

*The Sunrise Kingdom; or, Life and Scenes in Japan, and Women's Work for Women There.* By Mrs. Julia D. Carruthers. Presbyterian Board of Publication. 1879. The Sunrise Kingdom of this book has a double significance. The geographical locality of Japan may have given rise to the name, but if the dawn of a higher civilization should arise upon the Asiatic continent, it seems now probable that the first land which should witness the change will be these very islands. The "Flowery Kingdom" has indeed had longer contact with the civilized

world, but the rapid advancement of Japan, and the greater receptivity of its people indicate that our Western civilization is to be rapidly introduced into this, the nearest of the Eastern lands. The spread of Christianity is certainly to produce great changes—perhaps no greater change in Asiatic society than the elevation of woman. A book which calls attention to this subject must be welcome. Mrs. Carruthers has written altogether from a missionary standpoint, without even touching on the ethnological or philosophical questions which might arise, but as a work illustrating the point referred to in the title is worthy of perusal.

*Report on the Chaco Cranium. Miscellaneous Ethnographic Observations on Indians Inhabiting Nevada, California, and Arizona, by W. J. Hoffman, M. D.* It has been assumed by some that the Cliff-Dwellers of Arizona were the ancestors of the Mound Builders. If there is anything in craniology, we should say, from the evidences given in this pamphlet, that this hypothesis was far from being true. There is more resemblance between the Chaco cranium and the Calaveras skull than between these and any Mound Builder's cranium which we have ever seen. We do not rely, at the present state of the science, very much upon craniology, for the differentiation is so slight that it is often almost impossible to discover it, but if Dr. Hoffman, with his advantages, will follow up this line of research he will confer a great favor upon science. His ethnographic observations are also valuable, embracing the following points: the dress, food, fire, weapons, incantations, burials, signals, pottery, and pictographs of the Indians of Nevada, California, and Arizona. It is very unfortunate at this stage of ethnological investigation that Dr. Hayden's survey has been abolished. This pamphlet is a part of his last report.

*The Mound Builders. Being an Account of a Remarkable People that Once Inhabited the Valleys of the Ohio and Mississippi, together with an Investigation into the Archaeology of Butler County, O., by J. P. McLean. Cincinnati: Robt. Clarke & Co., 1877.* This little volume is a valuable accession to the literature which is rapidly increasing upon the interesting subject of the Mound Builders. The book is confined mainly to the works found in Ohio, and, as such, is more valuable than if it covered a wider ground. It gives the latest discoveries on this subject, as well as the latest points of dispute, namely, the tablets, but we think has given too much credit to the genuineness of the grave creek-stone. The archaeology of Butler County comprises about one-third of the volume. The cuts are numerous and valuable, and the publishers are worthy

of praise in undertaking a pioneer work upon the prehistoric, as they are for having published already a series upon the early historic, period in Ohio.

*Sixteen Saviors or One. The Gospels not Brahmanic. By John T. Perry. Cincinnati: Peter G. Thompson, 1879.* This book is the result of a recent spicy newspaper controversy over a very profound subject. Mr. Kersey Graves, of Richmond, Indiana, published a volume with the surprising title, "The Sixteen Crucified Saviors," and prefixed to the work an address to the clergy, in which he informs them that "the divine claims of your religion are gone, all swept away by the logic of history and nullified by the demonstrations of science." This introduction of Mr. Graves we should think was sufficient to stamp his book without any answer. But Mr. Perry has taken the pains to answer it, and hence we have another book on the same subject. The Sixteen Saviors are (we give the spelling as they are found in the book) Chrishna, of India, 1200 B. C.; The Hindoo Sakia, 600 B. C.; Thammuz, of Syria, 1160 B. C.; Wittoba, of the Telengonese, 552 B. C.; Jao, of Nepaul, 922 B. C.; Hesus, of the Celtic Druids, 834 B. C.; Quexalcote, of Mexico, 587 B. C.; Quirinus, of Rome, 506 B. C.; (Æschylus) Prometheus, crucified 547 B. C.; Indra, of Thibet, 735 B. C.; Alcestos (we suppose Alcestis is meant) of Euripides, 600 B. C.; Atys, of Phrygia, 1170 B. C.; Crite, of Chaldea, 200 B. C.; Bali, of Orissa, 725 B. C.; Mithra, of Persia, 600 B. C. This list we also think is sufficient, and especially the spelling. If anyone is taken in by such a charlatan as Mr. Graves, we should say let them be deceived. This idea of a Savior was familiar to many Eastern nations, but it was not embodied either in the history or the later conception of over a quarter of these characters. We are not satisfied with the answer, though it is probable that the appearance of other books of a more learned character, one of which is noticed in this number, will call out and be worthy of more thorough and dignified treatment of the subject. A great controversy is now arising over the historical faiths. Dogmatism is not likely to have much force. The historical study of Christianity is its strongest defense, but it will require profound scholarship and a candid spirit.

*Proceedings of the Rhode Island Historical Society, 1878. A Lecture, by Chas. L. Bryant, A. M., St. Paul Academy of Science, 1879.*

*Report of Peabody Museum, 1879: Aboriginal Soap-stone Quarries in the District of Columbia, by Elmer R. Reynolds; On the Discovery of a Stone Pueblo in New Mexico, by Hon. Lewis Morgan; The Method of Manufacturing Pottery and Baskets, by Paul Schumacker.*

## NEW BOOKS.

IN the 15th Bulletin of the United States National Museum, Smithsonian Institution, Ludwig Kumlien has presented a very attractive ethnologic sketch of the Eastern Eskimos. He was the naturalist of the preliminary polar expedition, which, under the orders of Capt. Howgate, left New London Aug. 3, 1877, for the purpose of collecting material, skins, skin clothing, dogs, sledges, and Eskimos for the use of a future colony on the shores of Lady Franklin Bay. The descriptive part of the volume contains all the Eskimo names of mammals, birds, fishes, etc., that could be obtained.

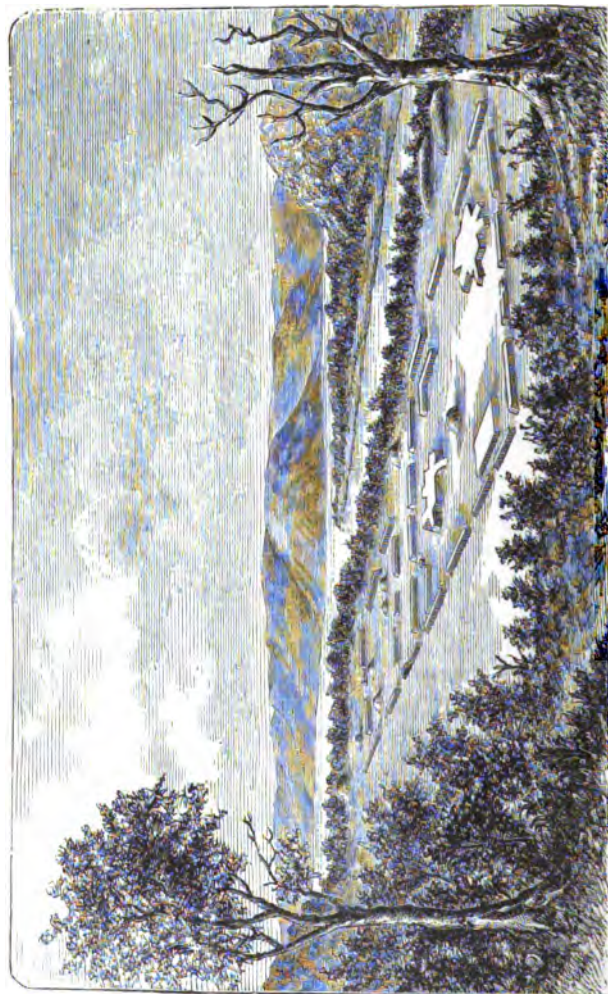
Dawson, George M., D. S. *Sketches of the Past and Present Condition of the Indians of Canada.* 8°, 31 pages. (Appeared in Canadian Naturalist, Vol. IX.) The contents of this pamphlet attest a long and profound acquaintance of the author with the British Indians.

*Hippolyte de Charencey: Le fils de la Vierge.* Havre, 1879. 28 pages, 8vo. In this article the learned author discusses a large number of Asiatic and American deities, heroes, and demi-gods, to whom the popular mind had ascribed, from the most ancient epochs down to our period, a birth from pure virgins, without the intervention of a human father.

*Hippolyte de Charencey: Déchiffrement des écritures calcaiformes on mayas. Le bas-relief de la croix de Palenque et le manuscrit Troano.* Alençon, 1879. 32 pages in 8vo. This article contains a short aperçu of all the attempts, hitherto almost fruitless, to decipher the manuscripts and inscribed tablets left to us by the Maya people of Yucatan. The author himself has in many previous publications shown his zeal in promoting the researches upon this subject.

The Munich Society for Promoting the Sciences of Anthropology, Ethnology and Prehistoric Archæology has just published its second volume, whose title is as follows: *Beiträge zur Anthropologie und Urgeschichte Bayerns.* München, 1879. Profusely illustrated. 266 pages, small 4to. This splendid publication was issued in four numbers, which are especially rich in researches upon the prehistoric status of Bavaria, a country which equals Pennsylvania in size, and is now being explored by some of the most learned and zealous archæologists which Germany possesses. The editors are Prof. T. Ranke and Nic. Rüdiger. We find instructive articles on: artificial caves in Upper Bavaria; on skulls of the Upper Bavarian race; on prehistoric modes of inhumation in Bavaria; on natural caves of the same country; on convolutions in the brains of twins; on the progress of the German element in Tyrol.





SACRED ENCLOSURES AND TEMPLE PLATFORM, AT MARIETTA, O.

# THE AMERICAN ANTIQUARIAN.

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## THE MOUND BUILDERS.

BY STEPHEN D. PEET.

Read before the *Congres de Americanistes*, at Luxembourg, Sept., 1876. Translated into French, and published in the proceedings.

It is well known that a race of people once inhabited the interior of North America, who were called the Mound Builders. Who this people were, whence they came, and whither they went, are still unknown, for an impenetrable mystery hangs over their entire history. Their name is taken from their structures, and all that we know of them is learned from these silent monuments. Scattered all over this broad land are these strange monuments of a numerous population which has passed away—the nameless graves of a nameless people. We interrogate these mysterious monuments, but they give back no answer. No voice comes from their silent depths, no inscriptions are written upon their surface. The lone wanderer from distant tribes can tell us nothing of them; those who early inhabited the land know nothing more than the later citizens, and the native tribes have scarcely a tradition in reference to their mysterious builders. The Mound Builders are still as strange a people as on the day when their works were first discovered. All that we can say in reference to them must be gathered from the few evidences which may be learned about these their monuments, from the few symbols of their religion, the few things which their works hold. The relics which are thus discovered do not describe their origin or their history, or their final destiny. These relics are only hints to us of their existence, of their race affinities, of their tribal divisions, of their social and religious customs. But to these considerations must we confine ourselves in writing upon this interesting but unknown people.

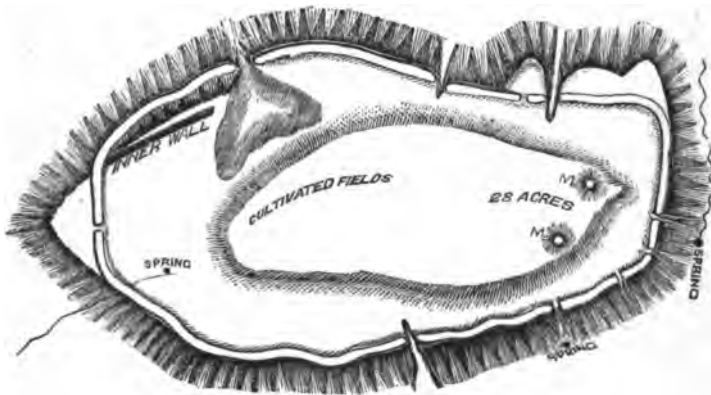
The first inquiry is, who were the Mound Builders? The name Mound Builders is a generic term, used to designate that class of people who built mounds. Their name is taken from their structures. Whether they were a separate race from others.



we cannot tell. The great problem of ethnology is whether they were connected with the later races, or with others who were found in distant regions. These problems have not yet been solved. The Mound Builders must only be studied in connection with their structures. We answer the inquiry, then, by referring to the locality in which these are discovered. The Mississippi valley is the place where the works of the Mound Builders are seen. In a general way their habitat may be bounded by the great geographical features of this valley; the chain of great lakes to the north, the Allegheny mountains on the east, the Gulf of Mexico on the south, and the Great Desert on the west. Within these bounds, mainly, do we find the structures which have given name to this strange people; and we may describe them as the ancient inhabitants of the Mississippi valley who built mounds. Other continents and other parts of this continent contain mounds. There are barrows or mounds in Europe and in Asia. There are mounds or earthworks in Honduras, Yucatan and Central America, as well as in the valley of the Mississippi, but the structures found in this region are distinctive, and peculiar to the inhabitants who dwelt here. Nowhere else on the continent are they found in such great numbers. Nowhere else are they found so exclusively, free from the presence of other structures. Nowhere else is such a variety of earthworks. To the eastward, along the coast of the Atlantic, there are earthworks, such as stockades, fortifications, and village enclosures. To the westward, beyond the Rocky Mountains, there are Pueblos, Rock Fortresses, and stone structures. To the northward, beyond the lakes, there are occasionally found mounds and earthworks; but in the valley of the Mississippi those structures are discovered which may be regarded as distinctive. The peculiarities which distinguish these from others aside from their being exclusively earthworks, are, 1, their solidity; 2, their massiveness; and 3, their peculiar forms. By these means the works of the Mound Builders are identified, and in their own territory, wherever a structure may have been erected by a later race, it may be known by the absence of these qualities. There are occasionally earthworks in the valley of the Mississippi, especially through the northern part, bordering on the lakes, which were evidently built by the Red Indians. Their resemblance, however, to the fortifications east of the Alleghanies, and the evident design for which they were erected, as defensive or village enclosures, the unfailing spring attending them, the absence of any religious significance, and their want of solidity and massiveness, help to distinguish them from the works of the Mound Builders.

A distinction has been drawn between the earthworks of Ohio, according to geographical lines, those bordering on Lake

Erie and the streams that run into it being called military, and those to the southward, along the Ohio river, being called sacred enclosures. It is a distinction, however, which is not only geographical but chronological. There are works on the Ohio river which are as strictly military or defensive, as those on the borders of Lake Erie. The same class of structures are also found throughout the State of New York, in the forests of Michigan, and in many other localities farther west. A simple earth-wall, running around the brow of some gentle declivity, or the top of some precipice, or on the edge of some isolated island, presents a very different aspect from those structures which are found oftentimes in the midst of large and fertile valleys, or upon many of the plats of ground where now stand some of the largest cities of modern days, and which, for massiveness and extent, surprise even those who behold them in the midst of the works of civilized man. These earth-walls, or so-called Military structures, we maintain, were not the works of Mound Builders, and can easily be distinguished from them by the absence of the qualities which we have already designated.



ANCIENT FORTIFICATION BELOW MIAMI RIVER, BUTLER COUNTY, OHIO.

They indicate a succession of races, and were evidently built by another class of people than Mound Builders. They are found among the works of the Mound Builders, and in their geographical territory, but the works of the Mound Builders are rarely found among them in any other locality. There may be occasionally tumuli, or burial mounds, in the region east of the Alleghanies, or associated with these military structures in other localities; but the remarkable structures which were peculiar to the Mound Builders, are seldom, if ever, found here. These more resemble the solid, massive pyramids which are found in Mexico and among the ancient civilized people of America, but are distinguished from them by being exclusively earth-works.

The analogy between these two classes of structures might be drawn, and the resemblance might be very suggestive; yet the contrast between the structures found in the valley of Mexico, or among the sandy plains of Yucatan and Honduras, and the works of the Mound Builders, is also very perceptible. If both are massive and solid, and have peculiar forms, and so resemble one another, yet the works of the Mound Builders are still distinctive.

We may say in reference to those who erected the mounds in the Mississippi valley, that they were probably not Red Indians. This position is based on several substantial reasons. (1) The traditions of the Indians themselves. (2) The differences in the skulls and skeletons, and other remains. (3) The structures or earthworks, which indicate that they were a separate people who erected them.

(1) The traditions would prove that the land had been inhabited by at least two distinct races. The Algonquins were inhabiting this region at the early settlement of the whites. The Delawares, who were a tribe of Algonquins living at an early date upon the Atlantic coast, have a tradition among them, to the effect that when their ancestors first came to the Mississippi valley, they found a race there preceding them. This tradition was learned by Heckewelder, a Moravian missionary among that people. According to this, the two races, the Leni Lenape and the Iroquois, emigrating from the far west, formed a confederacy and united their forces against a common foe. This was a powerful nation whom their spies had discovered in the country to the eastward of the Mississippi, called Telegewi, more properly Alegewi, who had built many large towns on the rivers flowing through their land. This people were a remarkably tall and stout race, higher in stature than the tallest of the Lenape, but were finally overcome and expelled from their territory and fled down the Mississippi, whence they never returned.

(2) There are skulls and skeletons found on the banks of the Ohio river, and in other localities, so buried as to give rise to the idea that they were the remains of those slain in battle, and the difference in form is very marked. The evidence given by skulls and skeletons is, however, not altogether reliable. There are skulls and skeletons found in tumuli on the banks of Lake Erie which are supposed to belong to the Iroquois or Algonquins. There are skulls and skeletons found on river banks, in gravel beds, and not buried in mounds, on the Ohio river, which are supposed to belong to the Mound Builders.

The conquering people and the conquered seem to have been buried together, and at present the distinction between the two races cannot be known. We may suppose the conquering peo-

ple to have been combative by nature, and in habit and life a race of hunters, and such the Indians have proved themselves to be. The conquered were probably peacable in their ways, domestic in their tastes, given to agriculture, and very religious by nature. It has been imagined that the different skulls which have been discovered indicate these diverse qualities and that the distinction between the Red Indians and the Mound Builders can be discovered in their posthumous remains. The study of craniology is at that stage however that nothing decisive concerning the ethnic traits of these prehistoric people can be determined by it. The chronological succession and the ethnical differences must be subjected to far more critical and careful study before we can arrive at definite conclusions. Other skulls have been exhumed from the depths of mounds in the Mississippi Valley which have been pronounced by some to be Mound Builders, and by others to be no other than the skulls of Shawnees, a race who once inhabited a large district in this valley.

(3) The earthworks must therefore be relied upon mainly in seeking the evidence upon this question. It is very certain that in this respect there were great differences between the populations who formerly occupied this territory. It is well known that the Red Indians were accustomed to erect fortifications or defensive enclosures, and that stockades were common among them even before the advent of the whites. The defensive enclosures found within the territory of the Mound Builders were probably those of the Red Indians. Their resemblance to those which are known to have been occupied by the Iroquois and other tribes is great. Their situation upon the summits of hills



A MOUND BUILDER'S CIRCLE, BELOW UNION TOWNSHIP, FAIRFIELD COUNTY, OHIO.

in various impregnable positions shows that they were erected by a warlike people. Their simplicity of structure is also observable. A simple earth wall enclosing an open space, near some stream or spring, and either completely isolated from every other—or possibly corresponding to some opposing enclosure in another locality—formed the defense of the Red Indians.

The works of the Mound Builders in the same region are in great contrast. Frequently erected in rich and fertile valleys, without regard to the defensive nature of the locality, often complicated in their architecture, containing squares, circles, parallel ways, altars and platforms, extending over a great range of territory, and evidently connected, having always some religious significance both in their structure and in their locality, it would seem that there could be no doubt that the works of the Mound Builders were erected by an entirely different class of people from the Red Indians. History records the tribes which were dwelling in this territory at the time of the advent of the white man, and describes their residences and their habits, but the testimony of history concerning these cannot apply to the mysterious structures of the Mound Builders.

The testimony given by the historians of De Soto's expedition is to the same effect. That expedition was through the territory of tribes of Indians who were far more permanent in their location and much more given to agriculture than the nomadic warlike tribes of the North, yet even these are described as living in stockades or enclosures, which were as distinct from the complicated earthworks of this same region as are the military structures of the Ohio valley from the works of the Mound Builders of the same locality. Col. C. C. Jones, who is inclined to the opinion that the southern Indians were of the same race with the Mound Builders of that region, says that, "even upon a cursory examination of these groups of mounds, with their attendant ditches, earth-walls and fish preserves, it is difficult to resist the impression that they are the remains of a people more patient of labor, and in some respects superior to the nomadic tribes which, within the memory of the whites, clung around and devoted to *secondary uses* these long-deserted monuments."

The testimony of Adair, of Bartram, and nearly every traveller who had an opportunity to see this territory when it was occupied by the later aborigines, is that these tribes were only occupying works which had been erected by a preceding and entirely different class of people. The description given by De Bry Cabeca de Vaca, the Knight of Elvas, and the early historians, essentially confirm the same opinion.

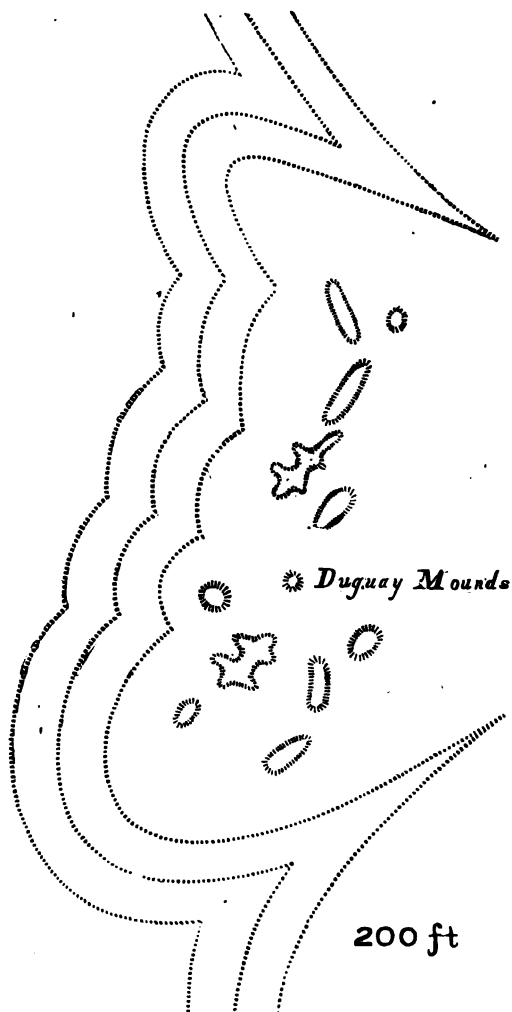
The burial customs which prevailed in this valley are also sometimes referred to as indications that there were different

racess inhabiting it. Isaac Taylor says that the Turanian race, of which the Chinese, the Mongols, and the Tartars are existing representatives, were preëminently the tomb-builders of earth. He says that this race was the first to spread beyond the cradle of mankind, and that they seem to form the chronological substratum of the whole world. He has endeavored also to show from certain linguistic traits that the tomb-building Etruscans belonged to the same great stock. Now so far as this test, if applied to the great divisions of the human family, is proof of affinity, we should have no hesitation in declaring that the Mound Builders belonged to Turanian stock, for they were certainly great tomb builders. The burial customs are, however, so diverse and so much the subject of development, that it seems difficult to ascribe the custom either to Turanian, Aryan or any other stock, much less can we ascribe certain customs to the separate races. There are different customs of burial among the aboriginal races of America. We are accustomed to classify these modes of burial into three: the recumbent attitude, the sitting posture, and the promiscuous bone heap, and yet it is difficult to decide whether these different modes were distinctive of races. Many of the mounds present burial in the recumbent attitude. The bodies are often also found deposited in a circle, or surrounded with circles of stones, as if some religious significance was given to the burial. It is known that the Red Indians, as a general thing, either deposited their dead in a sitting posture or else gathered them into bone heaps, so that it is at best a tentative conclusion that the attitudes were indicative of the two races, and we are forced to say that if we are searching for the race distributions and for the race connections of this mysterious people, aside from their geographical location and their peculiar earthworks, we have but little evidence as to who they were or to what race they belonged. The comparison of their structures with one another, the study of the relics of their skulls and skeletons, of their burial customs and of their symbolism, may hereafter reveal to us more than we know now, and with this we leave this part of the subject.

II. The division or classification of the Mound Builders, will then next engage our attention. Taking for granted that one people have erected the many structures now discovered, we propose to consider them, and see how they differ among themselves. It may be said, however, that in giving this classification we are by no means certain that we are giving a cotemporaneous division to the people who erected them. In fact, it is barely possible that later Indian tribes may have erected one class of works, while a more ancient people may have been the Mound Builders of another class. The strange thing about all these earthworks

is that they so differ according to geographical locality, and have so little evidence of successive erection in the same territory. It may be that the succession of forms, of eras of construction, shall be discovered, but for the present our only division is geographical.

In looking over the whole great territory which has been included in the *habitat* of the Mound Builders, we find at least five different systems of structures, each system peculiar to a geographical locality.



EMBLEMATIC MOUNDS—A GROUP SURVEYED BY THE AUTHOR, NEAR BELOIT, WISCONSIN.

The first system which I shall mention is that found in the north part of the Mississippi Valley, especially in the State of Wisconsin, and the name which has been given to it is that of the Emblematic Mounds. Here in this region, confined almost exclusively to the small territory west of Lake Michigan and east of the Mississippi, are those singular structures which have so attracted admiration and curiosity. The peculiarity of them is that they so strangely resemble the forms of the various wild animals of the country. This, fancy extends to nearly all the emblematic mounds in this territory, but it does not seem to be confined to any one class of animals or even to those known to exist in the region. If the Totems of the different tribes or the divinities of the people were thus indicated, we conclude that nearly all of the animals with which the people were familiar, were sooner or later thus symbolized. On many a hill-top overlooking many a beautiful stream and valley these silent, mysterious figures are seen—silent, yet expressive—as if the very animals which perhaps this rude people worshipped as their ancestors or their divinities, were still sleeping, but ready to rise from their position at the intrusion of the irreverent visitor. There are gigantic serpents, with their forms extending for rods, through the overhanging forests. Massive turtles lie sprawled on the summit of the lofty hill-tops. Long trains of 'coons and bears and wolves seem to follow one another around the bend of some lofty bluff which overlooks a beautiful valley. Lizards and tadpoles, wild geese and herons, in fact all that creep or fly or walk are here represented, and in one case it is supposed that the massive form of the elephant which has long been extinct on the continent has been portrayed. The race that inhabited this region were certainly a peculiar people. Whatever their age or their connection with other races, we cannot hesitate to call them the Emblematic Mound Builders.

(2) The next class to which I shall refer is one found just south of these. They are less marked than the preceding. The mounds are situated near the Mississippi River, and on its tributaries from the region of the Wisconsin to the north of the Ohio River, form this second class. With the exception of the massive pyramid at Cahokia and at St. Louis, these works are ordinary Tumuli. This is for the most part a prairie region. There are not many evidences of extensive settlement or populous villages, except in the valleys of the streams, but it may be said to be a region abounding with Tumuli. Whatever the race or the tribe was which inhabited this region, the works are distinguished by their typical form.

There are found in this territory certain massive structures which have attracted general attention, but the typical form is



the ordinary tumulus or burial mound. The work at Cahokia has been described. It consists of a pyramid of vast height, but it seems to be an exception, no other structure of the kind being found upon this region.

The mounds, which are found in great numbers along the banks of all the streams, have no other peculiarity than that they are simple heaps of dirt raised above the surface and rounded over, but having no emblematic form and no particular significance in their shape. So far as they have been examined, they have been proved to contain human remains, with the various relics which belong to a rude and barbarous people. The location of these burial-heaps is probably more significant than their shape. They are generally situated upon the high bluffs which border the streams and overlook the valleys of the streams. At times the choice of the spot for their erection seems to have been with a view to a military defense. As burial-places they would naturally be located on high land, where the beauty of the scenery would be an object; but there are locations where the commanding prospect for miles away would indicate that it was not merely the beauty of the scenery, but the extent of view which ruled in their erection. Why a burial-heap should also be chosen as a signal-station, we are not able to say; but there seems to have been a mysterious connection between the burial of their dead and their defense of the living, which can be plainly seen now in the location of their structures. This is true of the emblematic mounds. These are almost always located as if they were designed for military purposes. We can understand how this could be, for these structures may have been designed to commemorate the tribal gods or guardian divinities, and therefore would naturally be erected with a view to defense, each emblematic mound being a signal-station, as if the guardian divinity was not only dwelling among the people, but watching the tribe against the attacks of an enemy in the distance. But as to these structures which have no emblematic form, it would be difficult to ascribe any such idea; yet we are impressed with this fact, that the burial-places of these people were chosen partly, at least, with a view to their defense. This class of works extended over the prairie region, from the head-waters of the Wabash on one side, to the tributaries of the Missouri on the other; and from the line of the State of Wisconsin on the north, to the mouth of the Ohio on the south—a vast territory, which may be regarded as almost one unbroken plain. The traces of the prehistoric times seem to indicate that the solitude of the prairies was unbroken, a few mounds only being left to show that they were at all inhabited; but the streams indicate that a vast and lively population did

inhabit this region. The evidences of their existence are their burial-heaps, and so this region may be regarded as the home of the *Burial-Mound Builder*. All that we can say of their structures is, that they were burial-heaps.

(3) A third class\* of structures will engage our attention. On the Ohio river, especially in the region drained by its tributaries in the State of Ohio and southward of it, we find a large number of earthworks which are unlike anything else upon the continent. These are composed of numerous and varied and complicated works. They are not merely burial-heaps or solid emblematic mounds, but are composed of walls and platforms and truncated pyramids and altars and graded ways. The most common and perhaps typical forms of this region may be called the sacred enclosures. There are several kinds of these enclosures: one consisting of a simple square and circle, which are generally connected, and another a square enclosure containing pyramids or platforms, and attended with various other walls and ways, which evidently had a religious significance; and still others, which consist of long parallel walls and complicated circles and altars, forming a mysterious and strange combination of works, which no one yet has been able to explain.

There is no doubt but that these structures were erected with a religious view controlling, but a religion entirely different from that which is seen in either of the preceding classes. A much more elaborate and advanced system must have prevailed among those who erected them. A complicated system of symbolism is also shown by them. It would seem from their curious shapes and from their great extent, as well as from their elaborateness of design, that they were erected under the rule of a powerful Priesthood. There are found among them ordinary burial heaps and occasionally an emblematic structure, but the typical works are, as has been indicated, those of the sacred enclosures. This region is the home of the religious structures of the Mound Builders.

(4) A fourth class of works is found to the southward of the Ohio river, a region which extends from the Mississippi river on one side to the foot of the Alleghanies on the other, and from the valley of the Ohio river on the north to that of the Cumberland and Tennessee on the south. This is a mountainous and wooded territory, and the works, as a general thing, correspond to the character of the territory. They are almost universally of a military character. They have been frequently described, but are of so marked a military character that they are supposed by some to have been the works of white men. It has been said that the track of De Soto could be traced by these military

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\*See Plate I.

works, and that they must have been built by his party. They are, however, evidently the works of the Mound Builders. It has been said that these fortifications were the works of the Mandens, and that they derived the knowledge of their art from the Welch, under Prince Madock, who is supposed to have sailed with a colony to this country in the first part of the fourteenth century. The works, however, and their contents, do not differ from other earthworks in this country, except in their typical character. They consist largely of earth-walls, which are supposed to have been the enclosures of ancient villages. Their locations show that they were chosen for defense. We have found no evidence that in their structure they were any more advanced in military art than others. One peculiarity of these works is that they contain oftentimes stone cists or graves. This peculiarity of the burial places is, perhaps, as distinctive as even the earth-walls or defensive structures. It would seem that the custom of building a stone chamber for depositing their dead was common throughout this region. Such chambers are also found as far north as St. Louis, on the Mississippi river, and as far west as the Missouri river, but they were structures that seemed to belong to the inhabitants of this region. These may have been erected by the ancient tribes of the "Chouanons" or the Shawnees, and it is a question whether they belonged to the race who erected the fortifications and defenses. This region is the home of the military or defensive earthworks.

(5) There is a wide-spread territory adjoining the Gulf of Mexico where *pyramids* are the typical structures. Everywhere in this region the elevated platform was erected, and along with it, the circular mound for the temple, and between them oftentimes the chunky yard and the public square, the usual accompaniments of a native village and of royal authority. The race distinction is manifest in this form of structure, and nowhere else do we find it. There are found in the region numerous tumuli, and occasionally a fortified place resembling those found elsewhere, but the chunky yard, the *pyramid*, and the cone-like earthworks are peculiar to this region.

The five sections are thus marked by five distinct classes of structures, and it seems probable that that number of races existed in the great Valley of the Mississippi. The division made is geographical, but it may be that the rise of population and the growth of each tribe into its own territory may have made the geographical lines distinctive even of the ethnical divisions.

The further division of these separate classes or races might be given also as the tribal lines, also followed by minor geographical divisions in each separate territory, but this cannot now be presented.

This distinction has been made in some cases according to the structures, and each tribe recognized by its peculiar earthworks, but we leave this part of the subject with the general classification.

III. One more inquiry presents itself before we finish this interesting but very general review, and that is: What were the distinguishing traits of the Mound Builders? The answer to this inquiry involves a system of generalizing for which some may not be prepared. The study of the Mound Builders has usually been conducted with the close observation of three classes of evidences. 1st. Their relics. 2d. Their works or structures. 3d. Their skulls or skeletons.

In examining the traces of this mysterious people, we have to take them all in a collective capacity, and with a mere comprehensive method draw our conclusions. Perhaps, however, this broader style of reasoning may be just as safe and profitable.

The first peculiarity of the Mound Builders, to which we would refer, was their advance in culture and mechanical skill. This we learn not only from their relics, which may be known by their great perfection, but by all the evidences presented. The Mound Builders belonged to the polished stone age. Their relics show this. Different from the rude chipped, different from those now in use among the Western tribes. Their relics are marked by a peculiar finish. This is true of their axes, of their pipes, of their specimens of cloth, of their weaving implements, and all that is found belonging to them. There are occasional specimens of copper found in the mounds which show that they used metal, and the ancient mines of Lake Superior were probably worked by them, but this is not distinctive, for the same metal was known to be common among the tribes of the east, and even to the nations of Mexico and the west.

The very earthworks bear more evidences, in their elaborate and complicated systems and their architectural finish, than they do in their massiveness. It is strange that there are no traces of houses anywhere among their work—even those described by the early explorers are not now known. But the platforms are left and we cannot but believe that there was much skill in everything, erecting habitations, palaces, and even temples among those early races. No distinction has yet been made in the architecture or relics of America, such as prevails in Europe between the Paleolithic, Neolithic or Bronze ages. But for skill in art and architecture we may suppose the Mound Builders to be nearly equal to the cultus of the Bronze age, and perhaps almost arrived at the point attained by the Lacustrine inhabitants of Switzerland and Italy.

(2) Their agricultural state is another distinguishing feature. This is shown by their relics as well as by the location of their earthworks. The one fact which impresses every observer is that they have chosen the very best spots for their residences, and their chief seats of government are located even in the choicest of these. Agriculture ruled them, however, in the selection. At times we may see evidence that the water course had some influence, and possibly the convenience of access, but always their largest settlements were in the richest agricultural regions. With other tribes the fortification and defense were the common forms, and the agricultural seemed subordinate. Occasionally the Mound Builders combined the two, defensive and agricultural with especial wisdom, but the agricultural always predominates and the defenses are subordinate. The relics of the Mound Builders indicate the same fact. While there are arrow heads, spear points, lances and badges of office discovered, yet much the largest number of specimens are those used in the peaceable employments. Here are axes, fleshers, chisels and gouges in great numbers. Hoes also and spades made of stone, occasionally the most elaborate copper implements are those used for agriculture, either as plough points or cutting knives, needles and bodkins. Their pottery always indicates not only great finish, considerable artistic and imitative skill, but shows that a leisurely and peaceable state was the one which abounded among them. Sometimes to be sure their pottery contains the representations of the military head-dresses of their warriors, and give traces of the different military ranks, but by far the larger number of human figures are in the comical or leisurely mood, which indicate a peaceable and even merry condition. Pottery was the work mainly of women. It is amusing at times to see the whimsical shapes which these specimens assume, and we may almost imagine the hearty laugh which must have followed when some of these ridiculous figures came from the hands of the merry moulder of them. One peculiar little specimen represents exactly the shape of a little child's sock, just as if the little foot had been drawn out of it and left it all limp and careless, and we can picture the very domestic state which gave the leisure and the disposition to imitate such a thing. The needles and bodkins and many articles used in weaving also reveal to us still more of the quiet agricultural state in which the people dwelt.

(3) A third peculiarity distinguishing them was their highly developed religious condition. This too, is shown by the various traces of them which come to our knowledge. Nothing is more impressive than this evidence of the strong religious sentiment which prevailed among them; everything connected seems per-

vaded with it. If their artistic skill is apparent in their works, if a quiet agricultural state is shown by the character of their implements and structures, much more does the religious design express itself. Scarcely anything could so distinguish their massive and elaborately finished earthworks. It is the one thing which reveals itself as ruling the people. On every hillside, in every valley, in the midst of their agricultural plains, and on the banks of the many beautiful streams we see evidences of a most powerful and wonderful religious system almost equal to that grand and powerful system which ruled the Aztecs under the Montezumas. There is no doubt that this was the power under which this people was governed, and the system according to which their society was organized. If we look at the great earthworks found among them, the pyramids so massive and grand, at the immense and lofty circles which are so numerous, at the temple platforms and altars, if we look at the emblematic figures surmounting the lofty hill-tops, or at the innumerable burial heaps or tombs so scattered all over this great territory, we shall not fail to be impressed with this, that religion was the ruling motive.

Nor does it matter if we say that there are traces of different religious faiths among them. The rude Totem worship may have prevailed among the Mound Builders of Wisconsin, and the Animism of the lower or less advanced kind embodied itself in their works. The more advanced sun-worship may have prevailed among the southern races, as was shown to the explorers through their territory, or the elaborate system of ancestor worship, or Montezuma-like king worship may have existed among the tribes on the Ohio river. Yet religion was the one thing which is most apparent in all the structures. The emblematic animal mounds, the lofty pyramids, the complicated circles, walls and systems of earthworks, all show that it was religion which ruled the people. Surely the fortified places east of the Alleghany mountains give no such traces; the Rock Fortresses and Pueblos of the western nations reveal no such system, and scarcely do even the accounts of some of the Aztecs exhibit any more strength to the religious belief. Religion was the great peculiarity of the Mound Builders.

There are many elaborate and strange systems of works which can be explained on no other supposition. There are traces of it brought out more and more from the inscribed stones and engraved shells which have been discovered.

At times these earthworks assume geometrical figures, as if the builders understood the symbolism of the circle and square and triangle, and sought to combine them in one; and again, the most striking resemblance to the ornaments worn upon the

person is apparent, as if they sought to place on the breast of nature the significant emblems or the sacred representations which their priestly rulers were accustomed to wear.

The resemblance of some of their earthworks to the sacred stones and symbols which have been discovered has impressed many a student of their relics; and the wonderful mystery according to which their works are attended also shows that a religious system which we do not understand was the motive with which they were erected.

There are especial evidences in the grand and mysterious system of symbolism which prevailed among this strange people. No people on the continent, except those who have been advanced far in culture, have shown so much religious symbolism. The Egyptians have their elaborate system, the Hindoos have theirs, and the Persians theirs, and the Mexicans theirs; but nowhere among so rude, uncivilized and uneducated people do we find so much that is significant. Without alphabet or literature, without history, or connection with other nations, this people, in the center of the American Continent, had among them a system of symbolism which was expressive and profound.

The great work of the antiquarian is so to study their structures and their relics as to determine something in reference to the religion which prevailed among them. The beauty of location in which their religious structures are found, the wonderful correspondence between the very forms which they assume and the landscape itself, impress us with the thought that nature-worship, in its highest perfection, prevailed among this mysterious people; but it remains still a problem what the system was, and how far it resembled those known to history, and described and classified by authors familiar with the native tribes of the same and other localities on the continent. By these three things, however, art, agriculture and religion, the Mound Builders may be distinguished.

## BRADY'S LEAP, AND OTHER FACTS OF INDIAN HISTORY.

BY J. P. WOODRUFF, RAVENNA, O.

Portage County remained an unbroken wilderness until the month of May, 1799, at which time a settlement was made in Mantua Township, in the northern part of the county. At that time this region was the home of the Oneidas, Mohawks, and other tribes of the "Six Nations." The favorite hunting-grounds of the Indians were at the rapids of the Cuyahoga, in Hiram Township, and their winter residence was in Windham Township, in the Valley of the Mahoning. These points were connected by a blazed path which passed through the present town of Garrettsville. At the commencement of the war of 1812 the Indians left to join the British, and after the close of the war, five only returned to the old camping-ground. This small party was attacked at night by a company of whites, and four of the five were killed. The fifth escaped, and was the "last vestige" of his race in the Valley of the Cuyahoga. An old Indian trail, to which I have before referred, traversed the county from east to west at the time of the earliest settlements. It would seem that this interesting landmark was the common highway from Detroit to the Ohio River, and over it large numbers of red men were constantly passing. Large heaps of stones were found along the trail, at different places, and under these stones human skeletons were not unfrequently found. It has been surmised that, in accordance with a well-known Indian practice—that of casting stones upon the grave of an enemy—these loose stones were gathered by the traveling bodies of Indians, along the route, and cast upon these, the graves of enemies slain in war. In that part of the county through which the ancient trail passed, flint and stone relics of the last race are found most abundantly. These specimens are often of the best quality and the most skillful workmanship.

Another item of interest we find in a rude engraving which, for over seventy years, was to be seen on a rock which overhung the Cuyahoga River in Franklin Township. It was a rude representation of a turkey's foot, and it served for over half a century to recall and commemorate one of the most daring exploits in our early pioneer history. What Daniel Boone was to Kentucky, Capt. Samuel Brady seems to have been to Western Virginia and Eastern Ohio. He was a conspicuous figure in that large army of grand old heroes who, in early times, reclaimed the wilderness from the savage, and gave to it the highest degree of civilization ever attained in the history of man. Little has



been written of his life and exploits, but stories of his courage and perilous adventures have been handed down from one generation to another, and occasionally one of these legends finds its way into print. But the incident of which I shall speak was one more directly connected with our own local history, and was Brady's last and most thrilling adventure. About the year 1780 a party of whites, under Brady, pursued a marauding party of Indians to their village on the Cuyahoga, in Summit County; but, being surprised and put to flight by the enemy, by some means Brady became separated from his party, and was in turn pursued by the whole band of savages. Approaching the rocky chasm of the Cuyahoga River, and realizing that his life depended on the leap, he concentrated his whole strength, and cleared the chasm by a single bound. At the point where the leap was made, the shelving rocks overhung the river, and made the width of the channel twenty-one or twenty-two feet. Struck dumb with amazement, it was some time before the pursuers collected thought enough to fire upon him and then strike for the ford, some distance below. Wounded, and profusely bleeding, Brady ran to the lake which bears his name, and eluded his enemies by secreting himself in the waters of the lake. Chagrined at the escape of their expected captive, the Indians returned to the scene of the leap, and after consultation decided that the "pale-face" was no man, but a turkey, and that he flew across the stream. As a record of this decision, a rude representation of a turkey's foot was carved on the rock from which the leap was made. In 1856 the stone bearing this inscription was quarried, but a block containing the figure was preserved, and removed to Pittsburgh.

On a tract of high ground belonging to W. D. Rinehart, and which lies about three miles west of Ravenna, there was an Indian camp about a century ago, and on this ground the farmer, while plowing, has discovered two or three walled enclosures which he supposes to be graves. They are from four to six feet in length, and the sides, which are regular are formed of loose stones which have a charred appearance, and which extend upward almost to the surface of the ground. Until a few years since these sepulchres, or whatever they are, were overgrown by a heavy sod. The vaults have never been examined but the gentleman will open them in the spring, in the presence of myself and one or two other interested parties. On the same farm, years ago, numerous valuable relics were found, but, through indifference as to their value as specimens, the farmer disposed of them to neighbors and travelers. At one time, Mr. R. informs me, he discovered a quantity of flints, arrow points, etc., grouped together in regular order—a miniature armory, as it were.

EXPLORATION OF A ROCKY SHELTER IN BOSTON,  
SUMMIT COUNTY, OHIO.

BY M. C. READ, HUDSON, OHIO.

In the eastern part of Boston township the best crop of the carboniferous conglomerate exhibits bold bluffs fissured with ravines, with large waves of detached rocks at the base of the bluffs, where the rock has been undermined and broken by its own weight, or else detached and pushed out of place by the ice. So-called caves, which are simply long fissures in the rocks, are abundant, often with springs of pure water at the bottom, while the margin and detached rocks form frequent shelters which would be attractive places for residences to those unable to build comfortable dwellings. Among the detached rocks is one shelter composed of two large blocks twenty or more feet in diameter, separated about fifteen feet, with a huge block rising upon the top at the height of about twelve feet, making a large, perfectly protected room, open only at the north and south, and the northern opening thoroughly protected from storms by its close proximity to the adjacent bluff. Such a rock-shelter it is evident would afford a much better family dwelling than could be easily erected without cutting-tools, and would certainly be occupied by people having the characteristics of our native races. The abundant springs of water, the abundance of game to be found in this wood-covered, broken region, not far from the river which was one of their channels of communication, would be sure to attract settlers.

The exploration of this shelter was made in the early part of June, 1878. After removing a few inches of vegetable mold, a mixture of ashes and earth was reached, extending to the depth of from four and one-half to five feet, at the bottom filling fissures and covering rocks, fragments that originally partly occupied the floor of the shelter, and which the occupants did not attempt to remove. These scattered blocks covered the sandy debris conglomerate, and were gradually buried beneath the accumulated deposits of ashes and dirt, the evidences of long-continued occupancy.

The whole of this material was filled with evidences of the occupancy of the place as a human residence—pottery, bones, shells and stone implements. In the deposit of these there was no sudden transition; the bones near the top were in a good state of preservation, those that had not been changed by the fire not blackened but colored yellow by lapse of time. These became darker and less abundant as the excavation was carried deeper, and substantially disappeared before the bottom of the excavation was reached, showing that the earliest occupancy was

so long ago that the deposited bones in the dry shelter had been consumed by time.

Over two hundred and fifty fragments of pottery were collected. This had been manufactured in the immediate neighborhood, for it was composed of clay in which had been mixed coarsely pulverized fragments of the quartz pebbles of the conglomerate. It was all coarse, without any attempt at ornamentation for the sake of ornament. The outside of most of it, and the inside of part of it, was minutely worked with irregular, sharply defined depressions or casts—not the marks of basket work or braided grass, but such as would be produced if a mold for the formation of the vessel had been lined with the macerated and beaten inner bark of the elm or basswood. The mode of manufacture evidenced is as follows: A cavity was formed in earth or sand, of the form of the outside of the vessel; a coating of bark was prepared by macerating in water, beating it with stones until the fibres were partially separated and the whole mass pliable and plastic, with which the cavity was then lined, and the prepared clay plastered upon the inside of this lining. After it had sufficiently dried, the whole was lifted out of the mold, and ultimately burned in the fire. In other cases a mold was found of the form of the inside of the vessel, which was in like manner covered with the bark, and the clay plastered upon the inside of it.

Three forms of the rims or upper edges of the vessels were observed—one terminating abruptly, without any curve or angle, one with an outer angle about three-fourths of an inch from the margin, and one with a graceful outward curve. Small holes were made in the pottery, when moist, near the rim, and in one fragment a hole had been drilled, of a conical form, after it was burned probably—certainly after it was dry. The pottery near the bottom of the excavation was less abundant, and was heavier and coarser than that near the top, but manufactured in a similar manner.

The stone implements were abundant, but most of them crude and coarse. Only eleven flint or chert implements, and among these, two perfect small arrow-points, one fragment of a spear, two scrapers and one rimmer; the others were flakes or irregular fragments.

There was only one fragment of a polished-stone implement; this was the bit of a flat-sided celt or gouge, which was of especial interest from the fact that it had been broken at the edge and repaired by bringing the nicked part down to an edge; this was done by pecking out the substance of the stone in a groove, running back a little over an inch, till a new edge was obtained by a depression in the bit. The repaired portion was not polished.

There was one fragment of a dressed-granite hammer, several water-worn boulders, evidently gathered for hammer-stones, fourteen flakes from the conglomerate pebbles, and sixteen from water-worn drift pebbles. Both of these materials were utilized by striking a slice from one side, which would naturally produce a cutting edge on the side opposite to that at which the breaking force was applied. Oblate forms of these pebbles were united, and the rude artisans seem to have learned that the lines of cleavage in pebbles of that form would always be through the largest diameter. One wrought but unfinished stone implement was found, of the form called by some, "twine-twisters," but unpolished and without perforations. It was from the material of the local shales.

The most abundant of the stone implements were cutting-tools or knives. Of these, seventy-five were gathered up, made from the local shales and the metamorphic slate of the drift. They were all primitive forms of the stone knife, the material split in such manner as to secure one or more cutting edges, without any attempt to secure any particular form, some showing that after the cutting-edge had been dulled by use it was sharpened by blows upon the edge.

Besides these, there were about twenty other rock fragments, apparently broken out for rude scrapers, or as material from which to make cutting-tools.

All these articles showed a meagre supply of material, and but little skill in the art of adapting this material for use. The great bulk of the material was from the immediate neighborhood; the pebbles of the conglomerate were of the drift and the shales which crop out in the Cuyahoga valley.

Not a single article was found designed for ornament, nor was there any attempt to ornament any of the articles found. Everything seemed adapted to the necessities of a very low savage life, warmth and food.

The abundance of bone fragments indicated the large use of animal food. Every straight bone and the lower jaws of all the larger animals were so broken that every particle of the marrow could be extracted, and there was a rude attempt to fashion some of the bone fragments into useful forms. Over a half bushel of these fragments were obtained, and, from the meagre supply of materials for tools, it was a little remarkable that no more use was made of these bone fragments.

Among the bones, I was able to identify those of the bear, the wolf, the beaver, the hedgehog, the deer, the buffalo, the raccoon, the skunk, the squirrel, the chipmunk, the woodchuck, and fox. There were a number of the bones of birds, of which those of the turkey and the large blue heron were probably

identified. A number of muscle-shells from the Cuyahoga were also found. I have attempted to identify the remains of mammals only by their teeth, but there are fragments of leg-bones of graminivorous animals too large to belong to the common deer. These may be, and probably are, the bones of the elk. The jaws of the raccoon and the hedgehog or porcupine were especially abundant. In the fragments of jaws and in the whole jaws found, the teeth were ordinarily found, showing no attempt to use these articles as ornaments or otherwise. The fire seemed to have been built near the center of the shelter, and the great bulk of the bone fragments were found upon the west side, and of the pottery upon the east side, showing a very natural division of labor, the care of the cooked food being extended to those on one side of the shelter, and of the cooking-utensils to those occupying the other side. It is not difficult to imagine that the latter was the quarter of the women.

## WAS LA SALLE THE DISCOVERER OF THE MISSISSIPPI?

A LETTER FROM PIERRE MARGRY TO THE WISCONSIN  
HISTORICAL SOCIETY.

Early in August, 1879, there was a celebration at Mackinaw, in honor of Father Marquette and the discovery of his relics. The celebration of this festival will quicken the interest of your readers in the following article. A generation ago Pierre Margry, of Paris, was employed by General Cass to ascertain in French archives some minutiae regarding primitive Detroit. Afterward, he was engaged in far more extensive researches in that mine, digging up the materials which Francis Parkman had fashioned into half a dozen volumes, all excellent, regarding the French in North America. Moreover, for the last half dozen years, he has extended his investigations under the patronage of the United States Government. Under its auspices he has already published three octavos of memoirs and original documents, several of which had never before been printed. These productions all relate to the period previous to 1754. The volumes are printed from original manuscripts, and just as they are found. It was my fortune to see M. Margry often, on a recent visit to Paris. The matter he has already accumulated will fill three more octavos. Besides, he will add to them twenty early maps.

The following letter from him to the Secretary of the Wisconsin Historical Society will interest every dweller in the Valley of the Mississippi—or, as M. Margry puts it,—“all States comprised between the Alleghenies and the Rocky Mountains.”

In translating, I have added nothing but a few explanatory words in brackets.

JAMES D. BUTLER.

PARIS, July 4, 1879, }  
No. 39 RUE DE LA CHAUSSEE D'ANTIN. }

SIR:—I have received the letter in which you kindly inform me that the State Historical Society of Wisconsin has done me the honor to enroll me among its honorary members. I beg through you to present to that Society my thanks.

In truth, I cannot remain unaffected when I see citizens of your State noticing my labors and appreciating them—for their aim was to secure honor to my own country, and due justice to men whose names have been better known than their deeds. The favor of Americans encourages me to publish, as you wish,

three volumes more which are required to complete my work. [*Decouvertes et Etablissements des Francais dans l'ouest et dans le sud de l'Amerique Septentrionale, 1614-1754.*]

Together with your certificate of membership I have received three pamphlets, one of which I find is by my honorable visitor, Prof. James D. Butler. These, with others you have mailed me, make me understand to how many interesting topics a historian living on American soil can apply himself, which are necessarily neglected by a foreigner who observes only your general history, and that often merely from the difficulty of procuring books on the history of your individual States.

In 1862, that is to say seventeen years ago, I published in a French periodical a series of articles from July 30 to the 15th of September, on the discoveries of the Normans in the Valley of the Ohio and Mississippi. These articles have come to your knowledge very tardily. From this fact I see that your relation to our labors is the same as ours to yours. You come to know of them slowly. Accordingly I would gladly send you a copy of those articles. But it is impossible. I have in vain sought a dozen times to do so for others. The bookseller, Paul Dupont, Rue Grenelle, St. Honore, publisher of the journal, has told me many times that he had only complete sets and could not furnish single numbers.

These articles of mine have greatly troubled certain persons, as appears by the meeting at Missilimakinak (Mackinaw) regarding the discovery more or less reliable of the remains of Father Marquette.

What I said concerning the Cavalier de la Salle's priority in discovering the Ohio and Mississippi, has been the occasion of great and even acrimonious controversies. I care nothing for attacks from which search after truth is excluded, and which are little less than passion. It is enough for me to state that in the American edition of my volumes, which you have, I was not allowed to put in any notes of introduction, but that the map inserted in the French edition confirms what I have advanced respecting the discovery of the Ohio, and that I still very firmly believe that La Salle discovered the Mississippi by way of the lakes—by Chicago, and by the Illinois River, as far south as the 36th parallel, and all this before 1676 (the date of Marquette's discovery.)

This opinion of mine I base, first on the narrative made by La Salle, to the Abbe Renaudot.

This narrative describes an expedition in which La Salle was engaged southwest of Lake Ontario, for a distance of four hundred leagues, and down a river that must have been the Ohio. This was in 1669.

The narrative proceeds: "Some time thereafter he made a second expedition on the same river which he quitted below Lake Erie—made a portage of six or seven leagues to embark on that lake, traversed it toward the north, ascended the river out of which it flows, passed the lake of Dirty Water [St. Claire?], entered the Freshwater Sea [Mer Douce], doubled the point of land that cuts this sea in two [Lakes Huron and Michigan], and descending from north to south, leaving on the west the Bay of the Puans [Green Bay], discovered a bay infinitely larger, at the bottom of which, toward the west, he found a very beautiful harbor [Chicago\*], and at the bottom of this river, which runs from the east to the west, he followed this river, and having arrived at about the 280th (sic) degree of longitude and the 39th of latitude, he came to another river, which, uniting with the first, flowed from the northwest to the southeast. This he followed as far as the 36th degree of latitude, where he found it advisable to stop, contenting himself with the almost certain hope of some day passing by way of this river even to the Gulf of Mexico. Having but a handful of followers, he dared not risk a further expedition in the course of which he was likely to meet with obstacles too great for his strength. [See the work above mentioned, vol. 1, p. 378.]

I base my opinions, secondly, on a letter of La Salle's niece, the Mississippi and the River Colbert being both one. This letter, dated 1756, says the writer possessed maps, which in 1675 were possessed by La Salle, and which proved that he had already made two voyages of discovery. Among the places set down on these maps, the river Colbert, the place where La Salle had landed near the Mississippi, and the spot where he planted a cross and took possession of the country in the name of the King, are mentioned. [Vol. 1, p. 379.]

I base my opinion, thirdly, on a letter of Count Frontenac. In this letter, which was written in 1677, to the French Premier, Colbert, Frontenac says that "the Jesuits having learned that M. De La Salle thought of asking [from the French crown] a grant of the Illinois Lake [Lake Michigan], had resolved to seek this grant themselves for Messieurs Joliet and Lebert, men wholly in their interest, and the first of whom they have so highly extolled beforehand, although he did not voyage until after the Sieur De La Salle, who himself will testify to you that the relation of the Sieur Joliet is in many things false." [Vol. 1, p. 324.]

In fine, I found my opinion on the total antagonism between the Jesuits and the merchants, as well as those who represented interest, or only a legitimate ambition. In opposition to the Jesuits, the Cavalier De la Salle always associated with the Sul-

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\*Is there any earlier mention or description of that site?

picians or Recollets, whom Colbert had raised up against the Jesuits, in order to lessen the influence of those who would fain undermine him.

If La Salle had wished to practice deception, and to claim a merit that was not his, nothing would have prevented his saying that he had gone further down the River Mississippi or Colbert than he does say he went, whereas he left to Joliet and Father Marquette the honor of having penetrated to that river by way of the Wisconsin, and of having descended the Mississippi three degrees further than he, and that, before his enterprise of 1678.

These facts I have considered it my duty to establish in opposition to the allegations of those who affirm that La Salle did not conceive any projects of discovery until after the voyage of Joliet—which is just the contrary of truth. [See *General Journal of Public Instruction*, 1862, pp. 626, 657, 658].

All these questions I will treat of again when the Americans shall have discussed my documents. Knowing the topography, they have facilities which I have not. I would be very glad to see them promptly carry out a critical and geographical examination, showing the present names of the regions traversed by our explorers, of the places where they halted, and of those marked by any incident of interest.

In the States included between the Alleghenies and the Rocky Mountains, I make known the facts of their origin. It is for them to interpret those facts.

I beg you in my name to thank Prof. Butler for his souvenir. [A photograph of the \*ostensorium presented to the Green Bay Mission, in 1686, by Nicolas Perrault,—lost for more than a century,—discovered deep in the ground, and believed to be the oldest memorial with a date regarding any place west of the Alleghenies].

Believe me personally your very humble servant,

PIERRE MARGRY.

Mr. Lyman C. Draper, Corresponding Secretary Wisconsin State Historical Society.

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[\*See *ANTIQUARIAN*, Vol. II, No. 2.—ED.]



## THE NUMERAL ADJECTIVE IN THE KLAMATH LANGUAGE OF SOUTHERN OREGON.

BY ALBERT S. GATSCHET.

In the large majority of Indian languages the numeral noun morphologically differs from the Indo-European and Semitic numeral.\* We distinguish with precision between the cardinal and the ordinal and adverbial numeral; the Indian, in many or most instances, neglects this distinction, but in counting uses two forms of the cardinal, a shorter and a longer one. A series of distributive numerals is a rarity in the old world, but on the Pacific coast of America it is sometimes met with. Classifying adjectives, participles, or particles, are not uncommon in America, as additions to the numerals, determining the shape of the objects counted or spoken of. In Indo-European languages the numerals are so much ground down in their forms on account of their high antiquity, that only lengthy and most erudite comparisons can teach us the fact, that the numeration system is the quinary one; but in most Indian tongues the numeral forms are so transparent and perspicuous, that we can determine without trouble whether the counting system is the binary, ternary, quaternary, quinary, decimal or duodecimal.

Of the language spoken by the Klamath or Máklaks Indians of south western Oregon, I have given short descriptive articles in Vol. I, Nos. 2 and 3, of this quarterly, and from these it will be remembered that both dialects, the Modoc, or southern, and the Klamath Lake, or northern one, show some slight lexical differences.

In this upland language there are two modes of counting. In the longer the numerals are formed by the formative suffix *-ni*, a suffix usually appended to adjectives designating abstract qualities; the numerals in *-ni* are cardinals and adverbial numerals simultaneously, and if anything like ordinal numerals could enter into the mind of the Máklaks Indians, they would answer for this series also.\* The shorter form represents the nude stem of the numeral without the *-ni*, and stands for our cardinal only; it mostly serves for counting, rapid figuring, and for forming compound numerals above ten.

The numeral undergoes the same inflectional changes as the adjective. It is declined almost like the adjective; that is, it forms a series of cases by means of case-suffixes, or a kind of postpositions, which are not quite so numerous and multiform as in the declension of the substantive noun. It also possesses

\*In a circumscriptive manner the Sháwano language forms its ordinals by prefixing *mawí-* to the cardinal and suffixing to it *-sene*, *-thene*. Thus, *nisuathui* *seven* forms *mawinisuaathene* *seventh*. The suffix can also be dropped, and then we have *mawinisua-thui* *seventh*.

a distributive form, which inflects for case exactly like the absolute form and can in almost every respect be compared to the Latin form *seni, septeni, octoni, &c.*

Follow the numerals in *-ni* from one half to ten with their distributive forms, the apocopated forms and the inflectional paradigm:

## EXPLICIT FORMS OF THE NUMERALS UP TO TEN.

<i>Absolute Form.</i>	<i>Distributive Form.</i>
One half ná-igshtani, Modoc: ná'gshtani	nánigshtani
One, ná'dsh, ná'sh, ná's; once, tína	nánash
Two, twice: lá'pěni, lá'p'ni, lá'pi	lá'lap'ni, lá'lapi
Three, third, three times: ndánni, ndáni	ndándani
Four, fourth, four times: wúnepni, vúnepni	vú-unepni
Five, fifth, five times: túnepni	tútěnepni
Six, sixth, six times: nadshkshaptánkni	nanashkshaptánkni
Seven, seventh, seven times: lapkshaptánkni	lalapkshaptánkni
Eight, eighth, eight times: ndankshaptánkni	ndandankshaptánkni
Nine, ninth, nine times: nadshskě'kni } (Klamath Lake)	nanadshskě'kni
Nine, ninth, nine times: shkékishkni (Modoc)	sxesxékishni
Ten, tenth, ten times: tá-unepni, té-unepni	tetúnepni

## APOCOPATED FORMS OF THE NUMERALS UP TO TEN.

One half: ná-igshta, Modoc: ná'gshta	nán'gshta
One: ná'sh, nás	nánash
Two: lá'p	lálap
Three: ndán	ndándan
Four: vúnep, ú'níp	vú-unep, ú-uníp
Five: túnep, túnip	tútěnep
Six: nashkshápta, ná'sksapt	nánashksapt
Seven: lápkshapta, lá'pksapt	lálapkshapt
Eight: ndánkshapta, ndánkshapt	ndándankshapt
Nine: ná'shskěksh, ná'sxěks (Klamath Lake)	nánadsxěksh
Nine: shkékish, skěks (Modoc)	sxesxékish
Ten: tá-unep, té-uníp	tetúnep, tetúníp

The Klamath numeral *precedes* the noun which it qualifies.

It would be too lengthy and out of place to discuss here the various phonetic modes of deriving the distributive from the absolute form. The idea of severalty, or apportionment, is connected with this form and it is evolved by what I call distributive reduplication of the first syllable.

If a compound number (viz. a numeral above ten) is spoken of distributively, the first numeral of the compound and not the second is reduplicated. Thus, when I say "Give me thirty eggs every day," this will be rendered by ndándan'sh té-uníp nápal nánuk waitash nish lúi, and not by ndándan'sh tetúníp, nor by ndán'sh tetúníp nápal.

When numerals are connected with "classifiers," it will suffice to reduplicate the classifier distributively, though it would not be incorrect to do the same also with the first numeral of the number expressed.

For case the Māklaks numeral is inflected like the substantive, when used predicatively; but when used attributively the numeral will be inflected almost like the attributive adjective, or even with poorer and more truncated case-endings.

#### ATTRIBUTIVE INFLECTIONAL PARADIGM.

The inflection of the attributive numeral in its absolute form runs as follows:

ndānni tātaksni—three children (subjective case)

ndānna or ndannénash tātakiash—three children (objective case)

ndannénam tatakiam—belonging to, or of three children

ndānnantka tatakiamti, or tatakiamat—about three children

ndānnantka tātakiashtka—by means of three children

ndānna tatakiamxēni, or tatakiamkshxēni—where the three children are

ndānna tatakiamkshi—where the three children live

ndānna tatakiamkshtala—towards the place where the three children live

This paradigm proves the fact that to the numeral only case-suffixes, no case postpositions are appended; but both occur in the substantive, even in combinations of three at a time.

#### COMPOUND NUMERALS.

Numerals composed of hundreds, decads (tens) and units are inflected only in the units, the locative suffix *-nta* not being here considered as a form of declension. This suffix (*-tat*, *-ta*, *-nta*, *-anta*, *-nt*) serves to connect decadic numerals and what precedes them, to the following units. Thus, *seventeen*, *ta-unep-ánta lápkshapt pé-ula* really means "upon the ten seven I lay down," or, "to the ten seven I add." This number can also be expressed by saying: *tá-unepni pēn lápkshapt pé-ula*; "ten, again seven I lay down;" the particle *pān*, *pēn* "also, again, once more, additively" corresponding here to our *and*.

Where units are added to decads, the smaller number may be placed first, and then need not be accompanied by *pēn*. Thus we have the choice between these four methods for expressing *forty-three*: *vunépni ta-unepánta ndán pé-ula*; *vunépni tá-unep pēn ndán pé-ula*; *ndán pēn vunépni tá-unep pé-ula*; *ndán vunépni tá-unep pé-ula*.

The fraction *ná-igshta*, *nā'gshta one-half* is usually placed after the classifying term; *ta-unepánta láp pé-ula nā'gsta tála nū péwi*: I paid twelve dollars and a half.

Numerals standing in the instrumental case, in-tka, and not connected with another noun attributively, have an adverbial meaning, in which the idea of instrumentality is still apparent; lápantka hùt shlin, he was shot twice, viz. "by two shots;" hùk nish lápukantka shlatámpka, they drew their bows at me both at the same time, viz. "they began to shoot at me with two bows."

Classifying terms in constant connection with numerals, or for short "classifiers of form," are observed in many foreign languages and testify to the prevalent tendency of rude populations to speak with graphic and pictorial accuracy. Six suffixes of this kind are affixed for the same purpose to Aztec numerals, and about twenty to those of the Maya language of Yucatan;\* but the mode in which we see classifiers applied in the Klamath language is probably unique.

In this language the classifiers are not suffixed particles, but verbs and their participles, descriptive of form, shape or exterior of the articles mentioned or counted. They invariably stand after the numeral and usually after the name of the article, the shape of which is described; they are appended only to the numerals above ten, not to decads or numbers which terminate in a zero when expressed by figures. This fact fully explains the nature and origin of these classifying terms: they are intended to classify only the unit or units after the decad and not the decad itself. For the unit following immediately the decad in counting, as 11, 21, 61, 131 is in many instances qualified by other classifiers than the units between 2 and 9, as 22-29, 62-69, etc., because the former can be applied to single objects only, while the latter refer to a plurality of objects. Thus, when I say: ta-unepánta ná'sh lutish líkla, *eleven berries*, this literally means "upon the ten berries one I deposit (or you deposit) on the top;" in láp'ni ta-unepánta túnep lutish pé-ula, *twenty-five berries*, I intend to say "upon the twice ten berries five I put (or he, she puts) on the top;" or "after twice ten berries five he lays down." Líkla and pé-ula refer both to round shaped articles only; but the ten or twenty berries counted previously are not referred to by the classifier, only the *units* mentioned or counted. Before the classifying verb some subject pronoun as nù, î, hùt (*I, you, he or she*) is elliptically omitted, but not before its participles líklatko, pé-ulatko.

The verbs used in classifying the counted objects differ among themselves because they are descriptive of different exterior forms, but all are identical in their signification, which is that of *depositing, laying down, placing on the top of*. The simple

\*Besides numerals, other terms of the Maya language will also affix to themselves these classifiers. In Creek, classifiers are added not to numerals, but to other words; nini wákin othlitchatla, they reached a path "lying down."

verbal form, absolute or distributive, is used, when the speaker is just engaged in counting the objects; the past-participial form "*laid down*" is used in its direct or oblique cases, absolute or distributive, when the articles were counted previously and a statement of their number is made.

The fact that the units from one to nine are not accompanied by these terms, must be explained by some aboriginal mode of counting. It is proper to assume that the first ten objects, as fish, bulbs, arrows, were deposited on the ground in a file or row, or aside of each other, while with the eleventh a new file was started, or when the objects were bulky they were placed on top of the articles of the first decad. This explanation is suggested by the original meaning of these terms.

Examples are as follows:

Tunépní ta-unepánta násh máklaksash kshiklápkaš í-amnatko: commanding: (lit., "having with him") fifty-one Indians.

Ta-unepánta túnep pe-ulápkash Modokíshash hú shléa: he found fifteen Modoc Indians.

The list of classifiers subjoined gives their meaning as far as they occur connected with numerals; the verb íkla forms the majority of them, by means of various prefixes.

#### LIST OF NUMERAL CLASSIFIERS.

Líkla, part. líklatko, with their distributive forms as seen in our numeral series printed below, are found appended to numerals above ten embodying the first unit after the decad, as 21, 91, 441, etc., and mentioning articles of globular, circular, annular shape, or objects of a bulky, heavy-looking exterior. As the prefix l- refers to round or rounded things, the meaning of líkla is "to deposit *one* rounded thing." We find it used when speaking of beans, seeds, fruits, berries, balls, eggs, coins of money, thimbles, bottles, knives, watches, rocks, stones, boxes, wigwams and similar objects.

Pé-ula, part. pé-ulatko, with their distributive forms, are appended to numerals made up of more than one unit after the decad, as 32-29, 102-109, etc., and mentioning articles of the same description as given under líkla, and in addition to these, persons, animals and divisions of time. Pé-ula is derived from péwi, to give or bestow *many* rounded objects, by means of the *completive* formative suffix -ola, -ula.

Kshíkla or kshíkla, part. kshíklatko, with their distributive forms, are appended to numerals above ten embodying the first unit after each decad, as 31, 181, etc., and mentioning persons or animals. Like líkla, it is derived from íkla and signifies "to lay down *one* animate being."

Íkla, part. íklatko, with their distributive forms, are placed after numerals made up of two or more units after the decad, as

32-39, 142-149, and mentioning or counting inanimate objects of a tall, long, or elongated shape, as clubs, sticks, logs, trees, poles, boards, fence rails, rifles or pistols, boots, etc. The verb properly means: "to lay down, or deposit many tall or long inanimate objects."

Nékla or níkla, part. néklatko, with their distributive forms, are appended to numerals containing units from one to nine after the decad, and introducing objects of a thin, tiny or smooth and level surface or texture, as sheets of cloth, or paper, kerchiefs, mats and other tissues, excluding blankets or articles of dress enveloping the whole body. The verb shúkla, of same signification, which we would expect to introduce the *first* unit after the decad, is not in use for this purpose.

Shlékla, part. shléklatko, with their distributive forms, are found appended to numerals made up of units from one to nine after each decad, and referring to blankets, bedcloth, skins, and other large articles of clothing which serve to enwrap the whole body.

Yála, yálha, yéla, part. yálatko, yélatko are placed after numerals composed of units from one to nine after a decad, and are descriptive of long-shaped, tall inanimate objects, and therefore analogous to ikla in their use.

The following series of numerals is accompanied by different classifiers for each decad, thus giving successively the whole series of classifying terms now in use. After the foregoing explanations readers will have no difficulty in understanding its purport:

NUMERAL SERIES FROM ELEVEN UPWARD.

- 11 ta-unepánta nádsh líkla, distr. lílákla
- 12 ta-unepánta lá'p pé-ula, distr. pépula (and so up to:)
- 19 ta-unepánta nádsxéks pé-ula
- 20 láp'ni tá-unep, distr. lálap tá-unep
- 21 láp'ni ta-unepánta nádsh líklatko, distr. líláklatko
- 22 láp'ni ta-unepánta lá'p pé-ulatko, distr. pepúlatko  
(and so further up to:)
- 29 láp'ni ta-unepánta nádsxéks pé-ulatko
- 30 ndáni tá-unep, distr. ndándan tá-unep
- 31 ndáni ta-unepánta násh kshíkla, distr. kshikshákla
- 32 ndáni ta-unepánta láp íkla, distr. i-ákla
- 40 vunépní tá-unep, distr. vu-unépní tá-unep
- 41 vunépní ta-unepánta násh kshíklatko, distr. ksiksáklatko
- 42 vunépní ta-unepánta láp íklatko, distr. i-áklatko
- 50 túnepní tá-unep, distr. tútēnepní tá-unep
- 51 túnepní ta-unepánta nádsh nékla, distr. nenákla
- 53 túnepní ta-unepánta ndán níkla
- 60 nadshkshaptánkni tá-unep, distr. nanadshksaptánkni tá-unep

- 61 nadshkshaptánkni ta-unepánta nádsh néklatko, distr.  
nenáklatko  
70 lapkshaptánkni tá-unep, distr. lalapkshaptánkni tá-unep  
71 lapkshaptánkni ta-unepánta násh shlékla, distr. shlesh-  
lákla  
80 ndanksaptánkni tá-unep, distr. ndandanksaptánkni tá-  
unep  
82 ndanksaptánkni ta-unepánta láp shléklatko, distr. shlesh-  
láklatko  
90 nadshskē'ksni tá-unep, distr. nanadsχē'ksni tá-unep  
94 nadshχēksni ta-unepánta vúnip yála, or yálatko, i-álatko  
100 ta-unépni tá-unep; hundred, tina hundred  
101 ta-unépni tá-unep násh kshíkla  
400 vunépni ta-unépni tá-unep  
1000 ta-unépni ta-unépni tá-unep; tina tousän

It is evident, that with such lengthy numerals the noble science of mathematics could not make much headway among the Klamath Lake and Modoc people, even if the necessity was felt for it. The lack of a distinct form for the ordinal numbers renders the terms used for arithmetic fractions unmanageable, and the same may be said of the operations where adverbial numerals are required. In earlier times no short term existed for hundred and thousand. Fractions and multiplicative numerals are formed by adding corresponding participles, as "cut up, separated, folded," to the simple numerals.

#### ORIGIN OF THE NUMERALS.

Without expatiating further on the various uses of the Klamath numerals, I proceed to the consideration of their linguistic origin, which for the three first is involved in mystery. That the numerals of this idiom have the quinary counting system for their basis is apparent from the repetition of the three first numerals in the terms for *six*, *seven* and *eight*. The two first numerals are etymologically related to the corresponding ones found in the dialects of the Sahaptin linguistic family (Nez-Percé, Yákima, Klikitat, Yumatilla, etc.,) and in that of the Wayiletpu (Cayuse and Mólalé), both belonging to the Columbia River basin. The problem of the possible ultimate affinity of these families with Klamath, and among each other, could not be solved yet on account of our comparative ignorance of these idioms; but its solution would undoubtedly throw some light upon the origin of these numerals. Vúnep and túnep are compounds of the word *nép*, *hand*, and the prefixes *u-* and *tu-*; thus *vúnep*, *four*, means "*hand up*," and *túnep*, *five*, "*hand away, hand off*," indicating the termination of the counting on four fingers. *Kshápta* is abbreviated from *kshapáta*, "to bend backwards, to lean, recline upon;" the numerals composed with

this verb indicate the bending over of the digits named, as *lap-kshápata*, *seven*, for *láp nâ kshapáta* "two I have bent backwards," or simply *láp kshapáta*, "two are reclining, leaning (upon the palm) of the other hand." *Nadsh-sxékish*, "one left over" is in *Modoc* abbreviated into *skékish*, "what is left;" the same term also means "what was left behind, inheritance." *Tâ-unep*, *ten*, the original form of which seems to be *té-unep*, is a repetition of *túnep*, *five*, with a different prefix indicating plurality.

If the origin of these numerals is thus correctly traced, their originators must have counted only the four long fingers without the thumb, and *five* was counted while saying "hand off." The four or "hand up, hand high" intimates that the hand was held up high after counting its four digits, and some term expressing this gesture was in the case of *nine* substituted by "one left over;" *skékish*, which means "one only is left until all are counted." Tribes living in tropical and hot climates mostly possess the vigesimal system of numeration, which is rather unfrequent among the Indians of the United States. The cause of this is that the former go\* with their feet naked and therefore use also their toes for counting, while the latter are prevented by their moccasins from doing so. *Klamath* numerals show no affinity with the names given to the digits, and hence it is impossible to say whether they began counting with the index, or what seems more probable, with the smallest finger.

The comparative study of the numerals of different nations and races is most instructive for disclosing certain abstract ideas circulating among their originators, and therefore it can teach us something about the psychology and the reasoning faculties of the prehistoric nations preceding our epoch by hundreds of centuries. No wonder that some of the most gifted linguists like Fr. Pott, W. von Humboldt, and Aug. Schleicher have indulged in their study; they had perceived that a patient and circum-spective analysis of these remnants of the highest antiquity would acquaint us not only with *facts*, as do the grave-mounds, stone-chisels, and flint arrow-heads, but also with *ideas*, and that on account of the continuous order in which they follow each other, they are in some regards preferable to disconnected radices, stems and derivates for revealing the most antique modes of mental operations.

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\*Compare Wm. M. Gabb, on the Indian Tribes and Languages of Costa Rica, *Am. Philos. Soc'y*, 1875, p. 530.



## THE SIGN LANGUAGE OF THE INDIANS OF THE UPPER MISSOURI, IN 1832.

BY COL. GARRICK MALLERY.

In examining the sign language of the North American Indians, it is important and interesting to determine the extent to which the same signs to express the same ideas or objects prevailed at any past period among the several tribes, and thus to decide upon their general or special persistence. Although nearly every book of travels among the Indians found between the Alleghenies and the western slope of the Rocky Mountains, refers to their frequent and convenient use of sign language, there are only three useful collections of described signs of any early date, either printed, or, so far as ascertained, in manuscript. These are as follows:

1. A list prepared by WILLIAM DUNBAR, dated Natchez, June 30, 1800, collected from tribes then west of the Mississippi, but probably not from those very far west of that river, published in the Transactions of the American Philosophical Society, Vol. vi, as read January 16, 1801, and communicated by Thomas Jefferson, president of the society.

2. The one published in 1823 in "An Account of an Expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819-1820. By order of the Hon. J. C. Calhoun, Secretary of War, under the command of Maj. S. H. Long, of the United States Topographical Engineers." (Commonly called James' Long's Expedition.) This appears to have been collected chiefly by Mr. T. Say, from the Pani, and the Kansas, Otoes, Missouris, Iowas, Omahas, and other southern branches of the great Dakota family.

3. The one collected by Prince MAXIMILIAN VON WIED-NEUWIED, in 1832-34, from the Cheyenne, Shoshoni, Arikara, Satsika, and the Absaroki, the Mandans, Hidatsa, and other Northern Dakotas. This list is not published in the English edition, but appears in the German, Coblenz, 1839, and in the French, Paris, 1840. Bibliographic reference is often made to this distinguished explorer as "Prince Maximilian," as if there were but one possessor of that christian name among princely families. No translation of this list into English appears to have been printed in any shape, while the German and French editions are costly and difficult of access, so the collection cannot readily be compared by observers with the signs now made by the same tribes. The translation now presented is intended to facilitate such comparison. It is based upon the German original, but in a few cases where the language was so curt as not to

give a clear idea, was collated with the French edition of the succeeding year, which, from some internal evidence, appears to have been published with the assistance or supervision of the author. Many of the descriptions are, however, so brief and indefinite in both their German and French forms, that they necessarily remain so in the present translation. The princely explorer, with the keen discrimination shown in all his work, doubtless observed what has escaped many recent reporters of aboriginal signs, that the latter depend much more upon motion than mere position—and are generally large and free—seldom minute. His object was to express the general effect of the motion, rather than to describe it so as to allow of its accurate reproduction by a reader who had never seen it. For the latter purpose, now very desirable, a more elaborate description would have been necessary, and even that would not in all cases have been sufficient without pictorial illustration. In a few instances the present writer has added explanations or suggestions, preceded by a dash —. Remarks on the signs might be indefinitely extended, but the present object is to assist present observers in making their own comparisons and suggestions, which, it is hoped, they will contribute to the final work on Sign Language, now in preparation by the Bureau of Ethnology of the Smithsonian Institution, of which notice has been given in a preliminary pamphlet lately issued.

It is worthy of note that the distinguished explorer, who was the earliest to publish a comprehensive and scientific account of the tribes of the upper Missouri, is the only printed authority agreeing with the present writer in denying the existence of a universal sign language among the several tribes, in the sense of a common code, the report of which has generally been accepted without question. He states that the signs described, gathered by him from the tribes above mentioned, are unintelligible to the Dakotas (probably Sioux), Assiniboin, Ojibwas, Krees and other nations. He undoubtedly means, however, that different signs prevailed among the two bodies of Indians, so divided by himself, and that the individuals who had only learned by rote one set of those signs, would not understand the other set which they had never seen, unless they were accomplished in the gesture speech as an art, and not as a mere memorized list of arbitrary motions. It has been clearly ascertained that two Indians of different tribes who have neither oral language nor previously adopted signs in common, can, after a short trial, communicate through familiarity with the principles of gesture speech, signs being mutually invented and accepted. The same success attends the intercourse of Indians and deaf-mutes, of which several tests have been made and recorded, the latest and one of the most

satisfactory under crucial conditions having been under the direction of the present writer, on March 16, 1880, when seven Utes were taken to the National Deaf Mute College, at Washington, and started at interchanging stories and colloquies with about the same number of deaf-mutes.

The philosophic prince also was one of the first to correct another common error, in attributing the use of signs to the poverty of the aboriginal tongues. He states that "Dr. Mitchell (Warden, Amer. Antiquit., p. 179), has a very incorrect idea of the Indians when he believes that they ordinarily converse by means of signs. These signs are only used when they do not wish to be heard, or when speaking with other nations."

LIST OF THE PRINCE OF WIED-NEUWIED :

1. *Good.* Place the right hand horizontally in front of the breast, and move it forward.—This gesture is more fully described by a recent observer, as follows: "Place the right hand horizontally in front of the breast, and touching it, fingers and thumbs closed and extended, back of hand up, move rather sharply to the front until the forearm is nearly extended." It may convey the suggestion of "level," "no difficulty," and resembles some signs for "content." Many Indians and deaf mutes use gestures to express a pleasant taste in the mouth, for "good" even in a moral sense.
2. *Bad.* Close the hand and open it whilst passing it downward.—This sign is still frequent, the idea of dropping out the supposed contents of the hand as not worth keeping, being obvious.
3. *See.* Pass the extended index-finger forward from the eye.
4. *Come.* Elevate the index-finger near the face, extend the hand and return it with a number of gentle jerks.—In the prevalent sign noticed now for "come," in the sense of "come here," the index, after the forearm (not hand alone) is extended, is crooked slightly as if hooking on to an object, and drawn sharply toward the person. The degree of motion is, however, proportioned to the occasion, and the successive "gentle jerks" of the author indicate less urgency than one sharp redrawing.
5. *Arrive.* Clap the hands, elevating the index-finger of the right hand.—To express arrival at a place indicated by previous gestures, some of the upper Missouri tribes now hold the left hand fingers extended and closed, well out in front of the body, palm toward it, forearm horizontal, right hand between left and body, index extended vertically, other fingers and thumb closed, nails outward, then the right hand is carried sharply out until it strikes the left. The same

sign is used in a direction to go to a place indicated, and that for returning from a place is the same with reversed position of hands. It is conjectured that the clapping of the hands mentioned by the author as commencing the sign, refers to the accomplishment of the motion—as southern negroes say “done come.”

6. *Go. Depart.* Like *come*; but begin near the face and extend the hand with a number of gentle jerks.
7. *Speak.* Place the flat hand back downward before the mouth and move it forward two or three times.
8. *Another speaks.* Place the hand in the same position, beginning farther from the mouth, drawing it nearer and nearer.
9. *Man.* Elevate the index-finger and turn the hand hither and thither.—The “turning of the hand hither and thither” probably signifies more than the simple idea of man, and is used for “only one man” or “a man who is alone.” The finger represents the male organ of generation, and among some tribes the finger is held erect or crooked downward, to indicate mature or declining age.
10. *Woman.* Pass the palm of the extended hand downward over the hair on the side of the head, or downward over the cheeks.
11. *Child.* Push the index-finger rapidly into the air then draw the hand back downward.—The distance of the hand from the ground when the motion ceases, indicates the height of the child referred to. Indians often distinguish the height of human beings by the hand placed at the proper elevation, back downward, and that of inanimate objects or animals not human by the hand held back upward.
12. *Kill.* Clinch the hand and strike from above downward.—This motion, which may be more clearly expressed as the downward thrust of a knife held in the clinched hand, is still used by many tribes for the general idea of “kill,” and illustrates the antiquity of the knife as a weapon. The actual employment of arrow, gun or club in taking life, is, however, often specified by appropriate gesture.
13. *Arrow, to shoot an.* Place the tips of the fingers downward upon the thumb, then snap them forward.
14. *Gun, discharge of a.* Place both hands as in No. 13, extend the left arm, contract the right before the face, then snap the ends of the fingers forward.
15. *Arrow, to hit with an.* After the fingers have been snapped, strike the hands together and elevate the index-finger of the right hand.

16. *Gunshot*, to hit with a. After the fingers have been snapped, strike the hands together as in No. 15.
17. *God*, Great Spirit. Blow upon the open hand, point upward with the extended index-finger whilst turning the closed hand hither and thither, then sweep it above the earth and allow it to drop.
18. *Medicine*. Stir with the right hand into the left, and afterward blow into the latter.—All persons familiar with Indians will understand that the term "medicine," foolishly enough adopted by both the French and English to express the aboriginal magic arts, has no therapeutic significance. Very few even pretended remedies were administered to the natives, and probably never by the professional shaman, who worked by incantation, often pulverizing and mixing the substances mystically used, to prevent their detection. The same mixtures were employed in divination. The author particularly mentions Mandan ceremonies, in which a white "medicine" stone, as hard as pyrites, was produced by rubbing in the hand snow, or the white feathers of a bird. The blowing away of the disease, considered to be a malign power foreign to the body, was a common part of the juggling performance.
19. *Gun*. Close the fingers against the thumb, elevate the hand and open the fingers with a quick snap.
20. *Bow*. Draw the right arm back completely, as if drawing the bowstring, whilst the left arm is extended with clinched hand.
21. *Arrow*. Pass the index-finger of the right hand several times across the left arm.
22. *Arrowhead*, iron. With the index-finger of the right hand, touch the tip of the extended forefinger of the left hand several times.
23. *Gunflint*. With the index-finger of the right cut off a piece of the extended thumb, so that the finger is laid across the thumb-nail.
24. *Gun-screw*. Elevate the hand to indicate a gun, and twist the fingers spirally around the thumb.
25. *Question*. Extend the open hand perpendicularly with the palm outward, and move it from side to side several times.
26. *Gunpowder*. Rub the thumb and index-finger together repeatedly.
27. *Coat*. Separate the thumb and index-finger of each hand and pass them downward over the sides of the body.
28. *Leggings*. Open the fingers as before and draw them upward along both legs.

29. *Moccasins*, shoes. Raise the foot and strike it from front to back with the index-finger of the hand on the same side.
30. *Brechcloth*. Pass the flat hand from between the legs upward toward the belly.
31. *Hat*. Pass the parted thumb and index-finger about both sides of the head where the hat rests upon it.
32. *True, It is*. Lower the hand in front of the breast, then extend the index-finger, raise and move it straight forward before the person.
33. *Lie*. Pass the second and third finger of the right hand toward the left side in front of the mouth.—By the expression "second and third" finger the author means, as appears in other connections, the index and middle finger. The idea of double-tongued, two kinds of talk, prevails now for this sign among all Indian tribes, though it is sometimes made by one finger, the index, moved successively from the mouth in two different directions.
34. *Know*. Spread the thumb and index-finger of the right hand, sweep toward the breast, moving them forward and outward so that the palm turns up.
35. *Do not know*. First place the fingers in the preceding position, then turn the right hand upward with spread fingers, so that they point outward toward the right side.
36. *Much*. Move both hands toward one another and slightly upward.—This is the formation of a "heap."
37. *Little*. Pass the nearly closed hands several times by jerks over one another, the right hand above.
38. *Trade*. Strike the extended index-finger of the right hand several times upon that of the left.
39. *Exchange*. Pass both hands with extended forefingers across each other before the breast.—In the author's mind "exchange" was probably intended for one transaction, in which each of two articles took the place before occupied by the other, and "trade" was intended for a more general and systematic barter, indicated by the repetition of strokes, in which the indexed fingers mutually changed positions.
40. *Horse*. Place the index and third fingers of the right hand astraddle the index-finger of the left.—By the "third" the author means the middle finger. He counts the thumb as the first.
41. *Horse, To ride a*. As before stated but with this difference, that the right hand extends farther and the gesture is made quickly.
42. *Dog*. Pass the flat hand from above downward, stopping at the height of a dog's back.

43. *Beaver*. With the back of the open right hand, strike the palm of the left several times.
44. *Otter*. Draw the nose slightly upward with the first two fingers of the right hand.
45. *Bison*, female. Curve the two fore-fingers, place them on the sides of the head, and move them several times.
46. *Bison*, male. Place the tightly closed hands on both sides of the head with the fingers forward.
47. *Antelope*. Pass the open right hand outward from the small of the back.—This, as explained by Indians examined by the present writer, indicates the lighter coloration upon the animal's flanks. A Ute who could speak Spanish accompanied it with the word *blanco*, as if recognizing that it required explanation.
48. *Sheep*, Bighorn. [*Ovis montana*]. Move the hands in the direction of the horns on the sides of the head by passing them backward and forward in the form of a half-circle.
49. *Mule*. Hold the open hands high beside the head, and move them from back to front several times like wings.
50. *Elk*. Stretch the arms above and along side of the head.
51. *Deer*. Pass the uplifted hand to and fro several times in front of the face.
52. *Deer*, black-tail. First make the preceding gesture, then indicate a tail.
53. *Buffalo-robe*. Pass both fists crossing in front of the breast, as if wrapping one's self up.
54. *Day*. Place both hands at some distance in front of the breast, apart and back downward, elevate the index-finger and move it forward to indicate one, twice for two days, etc. When counting on the fingers begin at the left hand.
55. *Night*. Move both hands open and flat, that is horizontal, the backs up and in small curves in front of the breast and over one another.—The conception is *covering*, and consequent obscurity. In the foregoing sign for *day* the author probably meant that the hands, palms up, were *moved* apart, to denote openness.
56. *Sun*. Form a small circle with the forefingers and hold them toward heaven.
57. *Moon*. Make the same sign, after having made that for night.
58. *River*. Open the right hand and pass it before the mouth from above downward.
59. *Forest*. Slightly spread and raise the ten fingers bringing the hands together in front of the face, then separate them.—The numerous trees and their branches are indicated.

60. *Mountain*. Raise the arm from the elbow without moving the latter, the back of the clinched hand directed toward the front.
61. *Prairie*, plain. Lay the hands flat upon their backs and move them straight from one another in a horizontal line.
62. *Village*. Place the opened thumb and forefinger of each hand opposite to each other, as if to make a circle, but leaving between them a small interval, afterward move them from above downward simultaneously.—The villages of the tribes with which the author was longest resident, particularly the Mandans and Arikaras, were surrounded by a strong, circular stockade, spaces or breaks in the circle being left for entrance and exit.
63. *Kettle*. Same sign as for *village* but is made closer to the earth.—Singularly enough the configuration of a common kettle (the utensil obtained from the whites in trade being, of course, the one referred to) is the same as that of the stockaded villages, the intervals left between the hands representing in this case the interruption in the circle made by the handles. The differentiation is effected by the position closer to the earth.
64. *Lodge*. The same, with the addition that the finger is elevated to indicate the number, one.
65. *Lodge, entering a*. Pass the flat right hand in short curves under the left which is held a short distance forward.—The conception is of the stooping to pass through the low entrance, which is often covered by a common flap, and the subsequent rising when the entrance has been accomplished. In the same tribes now, if the intention is to speak of a person entering the gesturer's own lodge, the right hand is passed under the left and toward the body, near which the left hand is held; if of a person entering the lodge of another, the left hand is held further from the body and the right is passed under it and outward. In both cases both hands are slightly curved and compressed.
66. *Robe, red*. First indicate the wrapping about the shoulders, then rub the right cheek to indicate the red color.—The red refers to the paint habitually used on the cheeks, not to the natural skin. The Indians know better than to designate between each other their natural color as red, and have been known to give the designation *red man* to the visiting Caucasian, whose blistered skin often better deserves the epithet, which they only apply to themselves in converse with the conquering race that insisted upon it.
67. *Robe, green*. Indicate the wrapping about the shoulders, and with the back of the left hand make the gesture of stroking grass upon the earth.



68. *Robe, blue.* Indicate the wrapping, then with two fingers of the right hand rub the back of the left.—It is conjectured that the veins on the back of the hand are indicated.
69. *Az.* Cross the arms and slide the edge of the right hand, held vertically, down over the left arm.
70. *Beads, glass.* Stroke the fingers of the right hand over the upper arm of the left.
71. *Vermillion, cinnabar.* Rub the right cheek with the fingers of the right hand.—The chief use of this pigment was to paint the cheeks.
72. *Knife.* Cut past the mouth with the raised right hand.—This clearly refers to the general practice of cutting off food, as much being crammed into the mouth as can be managed and then separated by a stroke of a knife from the remaining mass. This is specially the case with fat and entrails, the aboriginal delicacies.
73. *Fire.* Hold the fingers of the right hand slightly opened and upward, and elevate the hand several times.—This portrays the forked tongues of the flame rising.
74. *Water.* Same as "River."
75. *Smoke.* Snuffle the nose and raise the fingers of both hands several times, rubbing the fingers against each other.—The rubbing may indicate the former mode of obtaining fire by friction, accompanied with smoke, which is further indicated by the wrinkled nose.
76. *Partisan.* First make the sign of the pipe, then open the thumb and index-finger of the right hand, back of the hand outward, move it forward and upward in a curve.—By the title of "Partisan" the author meant, as indeed was the common expression of the Canadian voyageurs, a leader of an occasional or volunteer war party. The sign is explained by his account in a different connection, that to become recognized as a leader of such a war party, the first act among the tribes using the sign was the consecration, by fasting succeeded by feasting, of a medicine pipe without ornament, which the leader of the expedition afterward bore before him as his badge of authority, and it therefore naturally became an emblematic sign. There may be interest in noting that the "Calendar of the Dakota Nation" (Bulletin U. S. G. and G. Survey, vol. iii., No. 1), gives a figure (No. 43, A. D. 1842,) showing "One Feather," a Sioux chief, who raised in that year a large war party against the Crows, which fact is simply denoted by his holding out, demonstratively, an unornamented pipe.
77. *Chief.* Raise the index-finger of the right hand, holding it straight upward, then turn it in a circle, and bring it

straight down a little toward the earth.—If this gesture is accurately described by the author its conception may be “elevated in the midst of surrounding inferiors.” In view, however, of the fact that Indians now make a forward curve instead of a horizontal circle, the former instead of the latter may have been intended in the curt expression. The prevailing delineation of the superior authority of the chief is by superior height, one form of which is reported as follows: Right forearm nearly vertical, index extended, thumb and other fingers closed, nails toward cheek and about eight inches from it. Extend right arm vertically about eight inches; turn index as an arrow turns in the air and bring down in front of face between the eyes until about opposite the chin.

78. *White man; American.* Place the open index-finger and thumb of the right hand toward the face, then pass it to the right in front of the forehead to indicate the hat. The fist can also be used in the same way.
79. *Negro.* First make the sign for white man, then rub the hair on the right side of the head with the flat hand.—The present common sign for “black” is to rub or touch the hair, which, among Indians, is almost universally of that color.
80. *Fool.* Place the hand in front of the head, back outward, then turn it round in a circle several times.
81. *Scalp.* Grasp the hair with the left hand, and with the right one flattened cut away over the left.
82. *Content, satisfied.* With the raised right hand, pass with a serpentine movement upward from the breast and face above the head.
83. *Mine, this belongs to me.* With the fist, pass upward in front of the breast, then push it forward with a slight jerk.
84. *Belongs to another.* Pass the right hand quickly before the face as if to say, “go away,” then make gesture No. 83.
85. *This does not belong to me.* First make gesture No. 83, then wave the right hand quickly by and in front of the face toward the right.
86. *Perhaps I will get it.* First, No. 83, then move the right hand right and left before the face, the thumb turned toward the face.
87. *Brave.* Close the fists, place the left near the breast, and move the right over the left toward the left side.
88. *Coward.* Point forward with the index followed by the remaining fingers, each time that is done draw back the index.—Impossible to keep the coward to the front.

89. *Hard.* Open the left hand, and strike against it several times with the right (with the backs of the fingers).
  90. *Soft.* Make gesture No. 89, then strike on the opposite side so as to indicate the reunion.
  91. *Hard, Excessively.* Sign No. 89, then place the left index-finger upon the right shoulder, at the same time extend and raise the right arm high, extending the index-finger upward, perpendicularly.
  92. *Repeat,* (a thing,) often. Extend the left arm, also the index-finger, and with the latter strike the arm at regular intervals from front backward several times.
  93. *Heard, I have.* Open wide the thumb and index-finger of the right hand, place them over the ear, and in this position move them quickly past the chin and nose.
  94. *Listen.* Place the open thumb and index-finger over the right ear, and move them hither and thither.
  95. *Run.* Lay both hands flat, palm downward, and pass the right rapidly high and far over the left, so that the body is somewhat raised.
  96. *Slow.* Extend the left arm, curving the forefinger and holding it still. The right arm does the same but is drawn back with several short and circular movements.
  97. *Fat.* Raise the left arm with fist closed back outward, grasp the arm with the right hand, and rub downward thereon.
  98. *Lean.* Hold the flattened hands toward one another before the breast, separate them moving all the fingers several times inward and outward toward and from the breast.
  99. *Sick.* Hold the hands as just stated, toward one another, bring them, held stiff, in front of the breast, and move them forward and backward from and to the same.
  100. *Dead.* Hold the left hand flat over the face, back outward, and pass with the similarly held right hand below the former, gently striking or touching it.
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### WAMPUM BELTS OF THE SIX NATIONS.

BY REV. W. M. BEAUCHAMP.

The seat of an ancient Indian confederacy yet exists in Onondaga County, N. Y., and "thither the tribes go up" for important business, as in days of old. On such occasions the keeper of the wampum belts brings them forth as records of the past. They are seldom seen at other times, but I lately had the privilege of a long and close examination, and subsequently a

friend secured photographs of all. In the following concise description, they will be numbered as in my drawings.

These ancient belts are of black, purple and white wampum, both sides appearing alike. Long strips of deer-skin form the foundation, and between these the beads are placed side by side in long rows. Thus a belt of seven rows wide will be a little wider than seven beads placed end to end, and each bead may be five-eighths of an inch long. From thong to thong, a thread of sinew passes through each bead from side to side of the belt. In some the beads are uniformly longer and narrower than in others. Most of the twelve remaining belts are broken, but some are perfect.

The first is a belt of dark wampum, of seven rows and with five open hexagonal figures of white beads. These probably represent the Five Nations, and the belt is complete.

The second is a broad belt of forty-five rows with a row of white, open diamond figures through the centre. A series of white points extend toward these from either side. Possibly this may be a little defective, but the length is yet that of 240 beads placed side by side.

The third is thirty-eight rows wide, by about 200 beads long. The ground is dark, with a white heart in the centre, having a line of white hollow squares united to it. Only four of these squares, representing nations, now remain. This is considered the most ancient, and to record the formation of the league. In fact it may be called a kind of constitution, and is venerated accordingly.

The fourth is a belt forty-nine rows deep, mostly of dark beads, with a kind of Vandyke pattern of white beads on either side. There are nine points on each border, and the belt is now 240 beads long. It thus contains nearly 12,000 shell beads.

The fifth is part of a long, narrow belt, seven rows deep and 240 beads long. It is of light purple beads, with a line of about a dozen black crosses through the centre.

The sixth is of fifteen rows, and is about 650 beads long, of colored wampum with dark figures. Two small men stand in a house in the centre, joining hands with the others without, six on one side and seven on the other. This is perfect, and is classed with No. 3, as recording the formation of the league. It is very handsome.

The seventh may be a French belt, with the "Long House" at one end in white, united to a cross at the other. This is the traditional interpretation, but the *house* seems more like a human figure. About 350 beads long, and perfect.

The eighth is of seven rows, with four double diamonds of dark beads through the middle. Imperfect; 200 beads long.

The ninth is light colored, with six dark diagonal bands. It is of twelve rows, broken, and about 300 beads long.

The tenth is very imperfect, and without figures. It has six rows of dark wampum, and is 250 beads long.

The eleventh is of thirteen rows of light wampum, much broken, and has four dark diagonal bands, each composed of three narrower. Length, 250 beads.

The twelfth is a small belt of dark wampum, of seven rows, much broken. The pattern is obscure, and the length 170 beads.

These are probably all that remain of the many belts once belonging to the Iroquois League, and they are yet considered its greatest treasures. Next to these are the strings of wampum, which are handed down from chief to chief, and which appear on all great occasions. From the chiefs I have had an interesting and minute account of their use. They are also symbolical; one bunch representing the Six Nations and each of the others a nation.

The age of these belts may be thought doubtful. Two are said to have been made at the formation of the league, say 350 years ago. It is possible, though I should be inclined to give them a later date. One or two others are probably over 200 years old, and some of the largest may be more recent.

Yet the Onondagas certainly used large belts as early as 1650, though somewhat sparingly. A little later those sixteen deep are several times mentioned, and in 1790 Deodoras gave one thirteen deep with the five houses on it. These were represented by squares and sometimes men. A line connecting a man at one end as the French governor, and a man at the other for the Iroquois, showed a treaty between them. "A prodigious large belt, of thirty rows broad," was produced in 1756, with the sun and Six Nations upon it.

Comparing the belts I have described, with these and others, it is interesting to observe that in 1759, one of 6,000 beads was considered very large. The largest I find mentioned was very much smaller than some of the fragmentary ones now at Onondaga. These last, I imagine, are slowly disappearing. Wampum is in request at the white dog sacrifice, and this may account for the broken condition of some of the belts. Certainly the account of these fine relics, given in a general way thirty years ago, differs much from what I found. Large as they are we do not see them in their first glory.

## CORRESPONDENCE.

## RELICS IN VERMONT.

*To the Editor of the American Antiquarian:*

Some two miles north of Swanton village, in Northwestern Vermont, is a ridge of sand, now nearly barren, but which, when Vermont was first settled was covered with a thick growth of Norway pines—some of them of great size. At this time the land was occupied for hunting and fishing by a tribe of Indians known as the St. Francis tribe, which were in reality one of the divisions, or families, of the Algonquins. This ridge of sand was a very ancient burying place, as the trees were some of them directly over the graves, and a much more recent burial place, nearer Swanton village, was not known to be such by the Indians, then in possession, not even by any tradition. Yet they were well acquainted with the burial places of their own tribe. A partial account of these ancient cemeteries was given by Prof. J. B. Perry, before the Boston Society of Natural History, December, 1868, and also by Prof. G. H. Perkins, at a meeting of the "American Association for the Advancement of Science," at the Portland meeting in 1873. In some points their opinions differed, and mine perhaps may differ on some points from either.

For much information concerning this ancient cemetery we are all indebted to Mr. H. H. Dean, of Swanton, who now owns the exclusive right to dig up the soil. His statements are trustworthy, and his habits of observation such that we deem him generally correct in his description of what he finds. Of late but little excavating has been attempted. The earlier openings were made by Deacon Elliot Frink. He states that those which he opened were fully six feet deep, but those opened more recently by Mr. Dean were, some of them, less than two feet deep. As the soil is a fine white sand, easily drifted by the wind, the actual depth must remain uncertain. Deacon Frink thinks that in one of the graves he opened the body was buried head down; but as the others have been in a sitting posture it is presumed that might have been previously disturbed by the falling in of the sand which filled the place occupied by the flesh, carrying the skull with it to the bottom of the grave. The skeletons are badly decomposed, no perfect skull or bones, except one femur and radius ever being found entire. One entire half of a skull has been found and is now in my charge with many other of the relics, and in the State Museum. The sand in the graves is generally colored a deep red, but is brown in some graves. This coloring seems to be an oxide of iron, and colors the sand for some two feet in thickness, and in the heart

of this colored sand are bits of bone and other ancient relics. These consist of pine gnarls, quite regular and bearing some marks of finishing, smooth, water-worn pebbles, one of white quartz weighing just one pound, pieces of black shells, sandstones, etc., but by far the largest number of relics are of polished stone or pottery, with eight or ten implements of copper. The copper implements are very badly corroded. The larger of them when found had fibers of wood adhering to it, but so much decayed that it crumbled upon exposure to the air. It is near six inches in length by one and one-fifth inch at one end, and nearly one-half inch at the other. Its weight is six and a quarter ounces Troy, and it is of Lake Superior copper. The other copper implements differ in shape as well as size. The chisels, arrows, and spear-points found in the graves or in the soil do not specially differ from others, yet belong in part to the rarest forms. The most peculiar, and what I more especially wish to direct your attention to, are tubes ranging from seven to thirteen inches in length, and in the vicinity of one inch (both more and less) in diameter. Nothing like them, to my knowledge, has ever been found elsewhere. They are doubtless made of clay and sand, baked in a careful and perfect manner. They are quite hard, but yet not so hard but what they can be scratched easily with a knife. When found they all have a plug loosely filling them nearer the thickest end. When the hole was made in the tube it is very evident it was made by a stick, which was drawn through and then used to widen the hole at the largest end of the tube, where the hole is also largest. This plug, which in one instance was a small quartz pebble, is sometimes of the same material as the tube, fits loosely, and in no position will it fill the entire hole. What the use of these implements were can only be that of conjecture. Some suppose them pipes, and that this stone plug prevented the tobacco from getting too near the mouth, but admitted the smoke so it could well enough be used for a pipe. Only one, however, shows any mark of fire, and that seems burned harder than the others in its manufacture. Some suppose that they were musical instruments, as a kind of harsh music can be made by one that can blow a horn. I am, however, more inclined to the belief that they were used as call whistles, as a very loud call can be made by blowing in them as you would in a tin horn. If they are elevated to an angle of forty-five degrees, and a plug dropped in, a peculiar broken sound may be produced which would be a good distinguishing call, but of no musical worth; for the enlightened ear at least. They are all smooth and plain upon the outside but one. This has the rough engraving of a bird upon it with wings spread as though flying. Underneath are three cabalistic

characters, to which no meaning can be ascribed. A small piece of a dish, made of the same material, was found in one grave, and other dishes like them have been found in Swanton elsewhere, all very nicely made. Two carvings, doubtless intended to represent some animal, have also been found. One of them in the State collection is of fine marble, and was doubtless fully polished when made, as it has some polished patches not corroded still upon it. As it lies in close proximity to a copper implement it is colored by its oxidization. The relics found in these graves differ in every way from those found in other parts of the State. That they certainly came from more ancient inhabitants than those Indian tribes who peopled this region upon its discovery and settlement, all must well understand. That they were allied to the Mound Builders of the west is rendered probable, by their copper, and by the similarity of the tubes and arrow-points, but this point we leave for further investigations, and only give this description of the tubes as one more testimony to the wide-spread use of this mysterious class of relics.

Lunenburg, Vt.

HIRAM A. CUTTING.

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#### RELICS IN MICHIGAN.

*To the Editor of the American Antiquarian:*

I will undertake a brief and general answer to your inquiries in regard to relics in this vicinity, which may fairly claim to be pre-historic.

There are (or have been, for little remains,) several tumuli upon and near the bank of the Detroit River, from two to four miles below the city. All are burial mounds. They occupy sandy elevations, fifteen to twenty feet above the water, are conical in shape, five to twenty-five feet in height, and thirty to fifty feet broad. All contain numerous skeletons, both original and intrusive. The former are found on or near the original surface, and are mostly in a sitting posture, and the faces toward the East, and sometimes a dozen or more are found arranged around the centre in a circle.

In one case, each held in his arms a pot, of unusual size, having a capacity of about two gallons. In other cases, pots are found near the heads. These are all composed of the materials common to the mounds—clay, mixed with ground shells and micaceous stones; black within, reddish without. They have regularly rounded bases, with wide mouths, somewhat flaring, and in part or whole ornamented with rude patchwork. With these are the usual stone implements, hammers, celts, chisels, fleshers, slings, pendants, spear and arrow-heads, with, rarely, sea shells and copper knives. The hammers and celts are mostly of greenstone, the arrow-heads of quartzose rocks, of



various colors, and often very large and beautifully constructed.

The human remains were mostly much decayed and only a few skulls have been preserved. These are mostly dolicocephalic, of good size and well formed. The skeletons show an average size of about 57 feet 10 inches. In most cases the tibia is very much flattened. No idols or images, nor any sculptures, have been found in this neighborhood, to my knowledge.

One, and by far the largest of the mounds in the vicinity of Detroit, seems somewhat exceptional in character. It is situated at the junction of the River Rouge with the Detroit, and was originally probably not less than four hundred feet long by two hundred broad and thirty or forty high. It is built of the light sand of the neighborhood, and contained many hundreds, if not thousands of skeletons, in every stage of decay and burial. It had two or more *pits*, filled with great numbers of bones, promiscuously disposed, and apparently corresponding with those used by the Hurons, and some other tribes at their "Festivals of the Dead," for which purpose bodies were preserved and brought from long distances. It is hardly possible to dig into the mound at any point, and to any depth, from two to ten feet, or even more, without disinterring human bones.

Evidences of *cremation* abound in some parts of the mound, and at various depths, consisting of beds and strata of coal, burned bones and ashes. Nothing certainly indicative of "altars" have been discovered, but the modes of interment are without uniform system.

None of the tumuli have any immediate connection with any other kind of pre-historic remains. But there occurs, in their vicinity, a circular wall of earth, the origin and use of which are unknown. It is situated upon a piece of flat, hard ground, on the immediate bank of the river, and a few feet above it. It is oval in form, the diameters two hundred and fifty and three hundred feet, and has a gateway near the water. The walls are two to three feet in height, the earth being thrown up from ditches, sometimes on the outer and sometimes the river side. The area within was not leveled. A bank fifteen feet high overlooks the work on the east or upper side, separated from it by a barren ravine; on the south, a few rods distant, is the river, and the other sides are surrounded by a marsh, many acres in extent.

These, are all the evidences that remain, known to me, of the occupation of the ancient races in the vicinity of Detroit, except the numerous graves, everywhere found, along and near the river, and without any distinguishing mark. In Canada, a few miles on the other side, are said to be circular mounds or "forts," and similar ones occur on and near the St. Clair River;

others in the Central and Western parts of Michigan, some of which bear a resemblance to the defensive works of Northern Ohio. Burial mounds are numerous throughout the Peninsula, and contain the usual class of relics. It is rare to find articles of copper, but some collections contain a few hatchets and knives of that metal. Some of the pottery is very beautifully made, and ornamented with scollop work of tasteful designs.

The so-called "Garden beds," of Western Michigan, are a very distinguishing feature of the ancient occupation, almost peculiar to this State, often covering many acres in a place, in great variety of forms, both regular and grotesque. They do not seem to have belonged to field culture, and it is hardly possible not to allow that they bear evidence of a taste for horticulture, unknown to any other of the nations north of Mexico.

These brief remarks may serve to give a general idea, without detail, of the character of the pre-historic remains of the Peninsula. I trust they may to some extent meet your object.

Detroit, July 1, 1876.

Yours truly, BELA HUBBARD.

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WORKS IN OHIO.

Capt. Henry A. Ford, one of the editors of the *Leader*, Cleveland, Ohio, sends us a brief note descriptive of a small but quite unique enclosed work, recently visited by him, near Higby's Station, on the Scioto Valley Railroad, eleven miles south of Chillicothe. It is believed to be the only enclosed work in that part of Ross County. Until Mr. Ford's visit it was unknown to some of the nearest residents, and he thinks it has never before been described. It is a quadrangle, or rather a figure bounded in part by four right lines, joined by extremely rounded corners, the latter occupying so much space as at first to create the impression that the work had the form of an imperfect circle. It is only about seventy-five feet across each way, interior measurement. The brow of the hill upon which it is located stands for the parapet in that direction, while embankments, now three to four feet in height, were thrown up for the other sides. The ditch—inside, of course, as the manner of the Mound Builders was—is still remarkably well defined, as also the gateway, which opens to the east, and is very large (about fifteen feet wide) for so small a work. It is commanded, as also every part of the structure, by a mound now some twenty-five feet in basal diameter, a little higher than the parapets, and peculiar as having a considerable depression at the apex, which may, however, be the result of a modern excavation or an intrusive burial. It may have been caused, however, by the falling in of the altar or burial enclosure, an interesting hypothesis which it is proposed to verify or disprove by further investigation.

## LINGUISTIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

THE materials for studying the SELISH dialects of Idaho, Washington Territory and British Columbia, were rather scanty up to this day; only the excellent grammar of the Flathead language, written by Rev. Gregory *Mengarini*, and published by J. G. Shea, New York, 1861, could give us an insight into its remarkable structure. This grammar of the learned Padre, who lives at Santa Clara, California, rests on a thorough knowledge of that idiom, but it is worded in a very queer sort of modern Latin, many of the terms being also translated into French. G. Gibbs has written a dictionary of a western dialect of this polymorphic stock of languages, the N'skwáli, or as commonly pronounced, "Nisqually," which was published in J. W. Powell's Contributions to Am. Ethnology, vol. I (1877, 4°). Neither of the two authors have availed themselves of a thoroughly *scientific* mode of transcribing their respective, phonetically difficult idioms. A new important work has now appeared on the Kalispel dialect, spoken on the Jocko Reservation, Montana Territory; this dialect is the same as the one studied by Mengarini, and the author availed himself, to a great extent, of the manuscript dictionary of this missionary, who spoke the language fluently. The words are arranged in etymological order under each radix, a disposition which, we think, will necessitate an alphabetic index to make it readily available to science. The title is as follows: *Rev. J. Giorda* (Soc. Jesu), *Dictionary of the Kalispel or Flathead Indian Language. Part I. Kalispel-English. St. Ignatius (Mission) Print, Montana. 1877-8-9.* Contains 644 pages, the grammatic appendix 35 pages. The purport of this book is further illustrated in the Report of the Commissioner of Indian Affairs, 1879, page 94; we only add that the appendix shows this dialect to be remarkably rich in forms of reduplication, and to surpass in that respect by a long way even the Polynesian idioms. The term Selish means *man, Indian*; Flatheads they were called, because their heads were not found to be *pointed or sharpened by pressure*, like those of the Chinooks and other tribes of the Northwestern coast.

CADDO. A manuscript vocabulary of Caddo, written in French orthography by Dr. Sibley in 1804, was lately forwarded to Prof. Otis T. Mason, in Washington, and published by him in the *American Naturalist*, 1879, page 787-790, together with a Lord's Prayer in Comanche. A peculiarity of Caddo nouns is that the majority of them consists of two syllables. Caddo

belongs to a Texan linguistic family of which very little is known; hence every farther publication on this vocalic language is most welcome.

OLD MAP.—To those interested in the study of the Indian languages spoken in the northwestern *Mexican States*, as Pima Alto, Pima Bajo, Ópata, Hiaqui, etc., we recommend the map of the Jesuit Father, Eus. Francisco Kino, of 1702, republished in Lient. Geo. M. Wheeler's Annual Report (octavo) of 1878, page 226, on account of its numerous and instructive local names. This map is accompanied by a commentary on the progress of geographical discovery in the State and in the peninsula of California, written by the geologist Jules Marcou. In the same report, pp. 131–139, there are views and descriptions of the ruins at Gran Quivira, New Mexico, east of the Rio Grande. The remains figured on the accompanying plate are evidently of Spanish origin, though there are many Indian ruins in the vicinity of the above locality. This portion of the report was written by Chas. C. Morrison, U. S. A.

THE PROFESSOR OF CHINESE in Harvard University, Cambridge, Mass., has not been favored yet with a single student to follow his courses. Some press organs of the lowest description are exulting at this fact. For the first year this non-attendance is not discouraging in the least, and ought to stimulate the regents to keep up this chair, even if no fund had been donated to render it permanent. Students will come in time. Chinese literature compares in every respect with the most prominent of Asiatic literatures. Not only is it extremely rich in works of every kind of prose and poetry, but it reveals us the secrets of a high antiquity, and of the history of a highly-civilized people, whose culture, it is true, runs in a very different direction from ours. The Chinese language, with its most ingenious structure, is well worth studying, even should no practical benefit be derived from it; its study is theoretically as instructive as that of Japanese, Sanscrit, Zend, Neopersian, Turkish or Arabian.

BA-NTU, SAN, KOIKOIN. From a German magazine we gather the important notice that the government of Cape Colony has, upon the suggestion of a number of European linguists of note, resolved to appoint a linguist, for making thorough scientific researches on the languages and dialects spoken by the natives of Southern Africa. Linguists of all nations can apply for this position, and the selection among the candidates will depend upon the choice of the Oxford professors Max Müller and A. H. Sayce. We may now entertain the hope that the relations of the languages spoken by the Bushmen or Sãn to the Hottentot or Koikoin dialects will be cleared up. From the material pres-

ently available we are unable to decide whether there is any radical connection between the two, and much less, if there are several or only one linguistic family in existence among the Sâns.\* The appointment includes the superintending of the library founded and endowed by Sir G. Grey, in Capetown; since the death of Dr. Bleck no further librarian had been appointed. Dr. Theophil Hahn, the African traveller, has lately forwarded to Prof. Dr. Fr. Müller, of Vienna, sufficient material for the study of the Bushman languages, and this scientist has satisfied himself that these manuscripts can be relied on as far as their accuracy of transcription is concerned.

OLD IRISH. A great impetus to the study of Celtic languages was first given by *Zeuss' Grammatica Celtica*, which made its appearance in 1853, in two bulky volumes, written in Latin. The eminently scientific method displayed prompted some scholars to popularize the results of this comparative grammar of *all* Celtic dialects, (comprehending also the remains of the ancient Gallic and Briton), and to improve from it the already existing grammar of Irish, Welsh and Armorican. Thus the "Society for the preservation of the Irish Language" has produced three admirable little elementary books, drawn up by its members on the plan of the elementary primers and readers of Smith, Arnold and Ahn. Modern Irish can now be acquired, even by foreigners, who are possessed of a common school education only, when they avail themselves of the "First, Second and Third Irish Book," and of the "Grammar of the Irish Language for the Use of Schools," by P. W. Joyce, LL. D. (1879.) The Archbishop of Tuam, John McHale, has translated into metrical Irish the melodies of the poet Thomas Moore, whose personal acquaintance he had formed as early as 1841. Of the latter the first part only has hitherto been published, the English text opposite to the Irish. Each of the above books can be ordered, at the popular price of 25 cents, from Lynch, Cole & Meehan, publishers, 12 Warren street, New York city, and they have also published Robert Emmet's speech, delivered in Dublin just before his execution, in an Irish translation, the English text standing opposite.

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\*It is to be expected that this linguist will make no use of the unscientific English orthography in transcribing native words and texts, for in that case all the time and trouble expended would be wasted, just as it was wasted in the study of so many of our Indian languages, which were fixed by means of that trashy mode of transcription.

# INDEX OF ARTICLES ON ARCHÆOLOGY, ANTHROPOLOGY AND ETHNOLOGY,

Which have appeared in American and English Periodicals during 1879.

BY CHAS. H. S. DAVIS, M. D., MERIDEN, CONN.

- Aboriginal Customs, Curious.** Dr. W. J. Hoffman. *American Naturalist*, Jan. 3 pp. Describes the methods of punishment for adultery among the Dakotas, Creeks, etc., especially the custom of cutting off the ears and nose. Traces the custom to the Egyptians.
- Aboriginal Races of the Southwest, the Practice of Medicine and Surgery by the.** Dr. W. J. Hoffman. *Philadelphia Med. and Surg. Reporter*, Feb. 22. 3 pp. Account of medicine men, treatment of small-pox, fractures, etc.; customs during child-birth.
- Aborigines of Victoria, the Intellectual Status of the.** (*Spectator*. (Littell's Living Age, April 26. 3 pp. Were originally alike, and all speak dialects of one tongue, but seem stricken with perpetual childhood. Before Europeans landed had discovered fire and the use of pottery. The race is perishing very fast.
- Anthropological Societies and Instructions in Anthropology, Report on.** Dr. Thulle. (*Revue d'Anthropologie*). *Kansas City Review*, Feb. 3 pp. Account of the various societies for the study of Anthropology since 1800.
- Antiquity of Man.** Rev. L. J. Templin. *Kansas City Review*, June. 7 pp. Describes Ancient Remains in America and Europe.
- Antiquity of Man, Another View of the.** B. F. Mudge, *Kansas City Review*, Aug. 2 pp. A reply to Rev. L. J. Templin.
- Antiquities in the Territory of Sybaris, Excavations and Discoveries of.** J. Barnabes. *London Academy*, July 19. Some tombs opened, containing a few coins, some thin gold plates containing traces of Greek writing, supposed to be mystic matter written by one initiated in the Eleusinian mysteries.
- Antiquarian Remains found in a Mound and in the Brahmapuri Hill, near Kolhapur, Memoranda on same.** R. J. Bhandarkar, *Jour. of Bombay Branch of Royal Asiatic Soc.*, No. 36.
- Arbor Low and other Circles of Stone.** Mr. Goss. *Reliquary*, July.
- Archæological Explorations in Tennessee.** F. W. Putnam. *Kansas City Review*, June, 12 pp.; July, 9 pp.; Aug., 9 pp.
- Archæological Notes from Italy.** J. Barnabes. *London Academy*, Aug. 30. Discoveries at Oviato, Olmeneta, Pieve Quinta, etc., of coins, bronzes, etc.
- Archaic Solar Cult of Egypt.** R. Brown, Jr. *Theological Review*, Jan.
- Assyria and Babylon, Recent Discoveries in.** *Builder*, Aug. 2.
- Assyrian Explorations, W. St. C. Boscamen.** (*Athenæum*.) *Century*, Aug. 9. Explorations under the auspices of the British Museum, made at Nineveh, Calah, Assur, Babylon, etc. The excavations on the Mujelibi mound have proved that this was the site of the famous hanging gardens.
- Assyrian Finds, Fresh.** B. H. Cooper. (*Sunday Mag.*) *Methodist Protestant Mag.*, June. 8 pp. Also condensed in the *Oriental and Biblical Journal*, vol. 1, No. 1, 1880.
- Atlantis not a Myth.** E. H. Thompson. *Popular Science Monthly*, Oct. 5 pp. Endeavors to trace the Copper Mines of Lake Superior, and the builders of the ancient cities in Central and South America, to the island of Atlanta, and gives the various theories and traditions in regard to that island.
- Aztecs, Backgammon among the.** E. B. Tylor. (*Macmillan's Mag.*) *Eclectic Mag.*, February. 7 pp. *Popular Science Monthly*, February. 10 pp. Describes the game as played by the Romans, Greeks and other nations, and concludes that the game came direct from Asia to America, reaching Mexico from the Pacific coast.

- Barbarians and Chauseen, History of the South Western. Translated from the "Tseen Hau Skoo," No. 95. A. Wylie, Journal of Anthropological Institute, XXVIII.
- Bounabarrhi, The Ancient Remains at. W. Simpson. London Academy, Nov. 1. Answer to Prof. Sayce, who claimed that marks of a pick on the stones proved their Hellenic character.
- Cave-Dwellers in America, The Age of. E. T. Elliott. Popular Science Monthly, August. The cave-dwellers of Colorado; their gradually improving architecture compared with the modern buildings of the Aztecs.
- Celts in the District of Columbia, The Discovery of "Turtle Back." Dr. W. J. Hoffman. American Naturalist, February. 8 pp. These typical forms of rude workmanship indicate greater antiquity than we find represented in the rudest forms of Indians who subsequently occupied the same localities.
- Cibola, The Ancient Cities of. Rev. S. Jackson. Rocky Mountain News, Jan.
- Cliff-Dwellers of the Far West. J. B. J. Sketchly. (Good Words.) Century, July 26. National Repository, October. 6 pp. Intercourse existed between Ancient Egypt and Western America. Account of Aztecs and the Pueblos of Colorado and New Mexico. America furnishes us with the only example, in comparatively modern times, of an age of bronze. The ancient inhabitants were gradually driven southwest and entered Mexico, overthrew the Toltecs, and matured the great system of Anahuac, which fell before the Spanish. Account of Cliff-Dwellings in New Mexico and Colorado.
- Colorado, Ancient Ruins in. London Builder, Oct. 4. Considers that the cliff and cave dwellings were occupied until at least as late as the Spanish Conquest, and that the Pueblos are more ancient; must have extended over many centuries.
- Copper Implements, Prehistoric. Rev. E. F. Slafter, New England Historical Genealogical Register, January. 9 pp. The author is led to the conclusion that the copper and stone implements in the possession of the Society originated with the Indians.
- Cranial Indices, A Scale to Find. G. W. Atkinson. Journal of Anthropological Institute, No. 26.
- Cuneiform Archæology, The Study of. Rev. B. W. Saville. Clergymen's Magazine, November. 16 pp. Account of two great libraries at Nineveh and Babylon twenty-five centuries ago. Evidences which cuneiform inscriptions of the Assyrian and Babylonian monuments afford of the truth and accuracy of the Bible.
- Cyprus, Rough Notes on Prehistoric. H. C. Rawlinson. Monthly Record of Geography. February.
- Dighton Rock Inscription, The. C. Rau. Magazine of American History. April. 3 pp. Letter from J. J. A. Worsaae, of Copenhagen, concerning the removal of the Dighton Rock to Denmark, and the erection of a statue of a Northman in place of the rock.
- Egyptian Archæology, The Study of. Rev. B. W. Saville. Clergyman's Magazine. October. 13 pp. Egyptology as gathered from the hieroglyphic monuments and papyri, affords no insignificant proof of the historical truth of the Old Testament. Examples shown from late discoveries.
- Engineering, Some Features of Ancient. London Builder, Aug. 2. 2 pp. American Architect, Aug. 9. Canals, artificial harbors, stone bridges, aqueducts, drainage systems, etc., existed 4,000 years ago, as well as now. Describes various engineering feats of ancient civilization.
- Ethnological Excursions in the Malay Peninsula. M. von M. Maclay. Journal of Straits Branch of Royal Asiatic Society, No. 2.
- Ethnological Notes on the Motu, Koitapu and Kolari Tribes of New Guinea. Rev. W. G. Lawes. Journal of Anthropological Institute, XXVII.
- Evolutions of New Varieties of Men, Some American Illustrations of the. Dr. D. Wilson. Journal of Anthropological Institute, XXVII.

- Flint Implements by the Aborigines and Prehistoric Inhabitants of America.** Curious Discoveries in regard to the manner of making. (Scientific American.) Engineering and Mining Journal. August 9. Illustrated. Remarks of Mr. F. H. Cushing at a meeting of the Anthropological Society, at the Smithsonian Institution. How the aborigines manufactured pottery, stone axes and flint arrow-heads. The study of arrow-making establishes the groundlessness of all archæological classifications of chipped articles, based on diversity of form alone.
- Games, A History of.** E. B. Tylor. (Fortnightly Review.) Eclectic Magazine, July. Gives accounts of different games in use by the Kalmuks, Maoris, Egyptians, Persians, etc., and traces their connection with the games of the present day, as chess, backgammon, polo, dice, checkers, fox-and-geese, etc.
- Gaul and Britain, Monuments of.** B. Shipp. Louisville Magazine, October. 9 pp. Accounts of the Gallic stones in various parts of Great Britain. Thinks that ages before the first known inhabitants, other peoples inhabited these regions, and transmitted their religious ideas and ceremonies to those who succeeded them.
- Gun Flints and Neolithic Art.** (English Mechanic.) Saturday Magazine, August 23.
- Human Family, The Primitive.** C. S. Wake. Journal of Anthropological Institute, XXVIII.
- Human Race Begin? When Did the.** W. W. Kinsley. Penn Monthly. September, 16 pp.; October, 9 pp. Description of Ancient Remains in Great Britain, Denmark, Egypt, India, Peru, etc.; different theories in regard to the flood, and shows that while many widely different nations witness to the confusion in which the subject of the beginning of the human race is yet involved, yet they also show some reconciliation possible, and encourage Christians to still hold firm to their confidence, and with patience wait.
- Indian Metaphors and Myths, The Westward Spread of some.** Indian Antiquary, June.
- Inter-Oceanic Races of Men, A Revised Nomenclature of the.** Rev. S. J. Whitmee. Journal of Anthropological Institute, XXVII.
- Lake-Dwellings of Switzerland, The Ancient.** Boston Journal of Chemistry, January. Account of Discoveries at Lake Neuchâtel.
- Lake Village, A Buried.** (Spectator.) Century, July 12. Account of Discoveries at Seeberg, Canton Berne, of bone, flint hatchets, bronze needles, pottery, and animal remains. Historically and archæologically one of the most interesting localities in all Switzerland.
- Lost Race of America, Notes on a.** Lieut. A. W. Vogeler. American Naturalist, January. 3 pp. Origin of the Indians of Western Florida, as traced in the shell mounds. Habits, ceremonies and manner of interment of this lost race are parallel with those of the ancient Danes.
- Man, Early Traces of.** G. De Mortillet. (Revue d'Anthropologie.) Popular Science Monthly, April. 5 pp. Works plentifully scattered throughout France, England, Spain and Italy. The earliest quaternary epoch is characterized, so far as man's works are concerned, by a stone implement of peculiar form, found in abundance in France, England, Spain, and in the valley of the Delaware, near Trenton, N. J. Found also in Egypt. During the middle tertiary there existed a creature, precursor of man, which was acquainted with fire, and could make use of it for splitting flints.
- Marriage, Recent Investigations into Archaic Forms of.** Calcutta Rev., Jan.
- Mediæval Workmen's Tools, On.** J. L'Estrange. Norfolk Antiquarian Miscellany.
- Mounds, Ancient Artificial.** B. Shipp. Louisville Magazine, January. 7 pp. Refers to the Mounds of Europe and Asia, as described by ancient and modern writers.
- Mound Builders? Were they.** S. L. Frey. American Naturalist, October. 7 pp. Describes the contents of some graves, and considers the question whether the Mound Builders extended their occupation as far east as Eastern New York.



- Mounds of the Island of Marajo, Brazil, The Artificial.** O. A. Derby. *American Naturalist*, April. 5 pp. The work of man, of an exceedingly industrious race, and intended as works of defence, as dwelling places, and as cemeteries for the dead. Pottery found in great abundance, with the rudiments of art.
- Mounds in Kansas, Prehistoric.** *Kansas City Review*, January. Describes a mound near Junction City, Davis County, Kansas.
- Mounds Simulating Animal Forms, Ancient.** Dr. Phenné. *London Builder*, Oct. 4. Paper read before the International Congress of Americanistes, Brussels. Refers to mounds in America and China.
- Olympia, Excavations in.** *London Builder*, July 5. By the German government, bringing to light three heads and three torsos in marble, besides many important inscriptions.
- Palæolithic Implements from the Valley of the Lea.** W. G. Smith. *Journal of Anthropological Institute*, XXVI.
- Palæolithic Man a Reality of the Past or a Myth of the Present?** By N. Whitley. *Journal of Psychological Medicine*, April.
- Patoli in Ancient Mexico, and its probable Asiatic Origin, The Game of.** E. B. Tylor. *Journal of Anthropological Institute*, XXIV.
- Peruvian Antiquities.** Dr. E. R. Heath. *Quarterly Journal of Science*, January.
- Pliocene Man.** Dr. C. C. Abbott. (*Science News*.) The evidence which Prof. Whitney produces to confirm the indications of tertiary man, both in Europe and Eastern North America. Thinks that unquestionable traces of the missing link are now resting in some tertiary deposits.
- Polygamous Marriages among the Kafirs of Natal and countries around.** J. Sanderson. *Journal of Anthropological Institute*, XXVI.
- Polynesia, The Ethnology of.** Rev. S. J. Whitmee. *Journal of Anthropological Institute*, XXVI.
- Pottery among Savage Races, Notes on the Manufacture of.** C. F. Hart. *American Naturalist*, February. 16 pp. Use of pottery unknown to many savage peoples. Wooden and birch-bark kettles often used by Indians. The art of pottery doubtless originated independently in many different nations. Material used by different peoples for making pottery.
- Pottery in Prehistoric Times.** L. Jewitt. *London Art Journal*, November. 3 pp. Illustrated. Recent explorations in the Wolds of Yorkshire, and the districts of Durham and Northumberland.
- Prehistoric Implements of the Rivers Coyote and Guadalupe, Santa Clara County, California.** Jennie R. Bush. *American Naturalist*, November. 3 pp. Account of knives, scrapers, arrows, drills, hammers, saws, axes, war-clubs, etc., scattered along the river bed.
- Preserving the Dead in Darnley Island and in South Australia, Illustrations of the Mode of.** W. H. Flower. *Journal of Anthropological Institute*, XXVII.
- Psychological Science: American Anthropology.** Dr. L. A. Alford. *St. Louis Eclectic Medical Journal*. The brain is the cephalic ganglia for man, as for insects; the lobe condition of man, is equalled only by the monkey. All the lower races possess mind. Mind is instinct, or transmutation of physical forces.
- Relationship Used among Primitive Peoples, The Origin of the Classificatory System of.** C. S. Wake. *Journal of Anthropological Institute*, XXIV.
- Relationship and Names used for them, among the Peoples of Madagascar, chiefly the Horas; together with Observations upon the Marriage Customs and Morals among the Malagasy.** Rev. J. Sibree. *Journal of Anthropological Institute*, XXVIII.
- Rock Carvings in the Neighborhood of Sydney.** Sir C. Nicholson. *Journal of Anthropological Institute*, XXVIII.

- Roman Antiquities at Sydney Park, England.** (Builder.) American Architect, May 31. First occupied as a military station. Coins found extending from Augustus to Arcadius. One of the buildings supposed to be the remains of a temple.
- Roman Forum, Recent Excavations of the.** E. I. Anson. London Builder, June 14. 3 pp. Forum not larger than Lincoln's Inn Fields. Description of the various buildings surrounding the Forum, and the purposes for which they were used.
- Ruins and Monuments, Preservation of Ancient.** Chambers' Journal, November.
- Skeleton Found at Cissburg, April, 1878, Notes on a.** G. Rolleston. Journal of Anthropological Institute, XXVII.
- Skulls Brought by Captain Burton from the East, Notes and Observations on.** Dr. C. Blake. Profs. R. Owen and G. Bush. Journal of Anthropological Institute, XXVI.
- Smyrna, Archaeological Letter from.** A. H. Sayce. London Academy, October 18. Bounar-bashi not the seat of Homeric Troy, but, if to be found anywhere, it is at Hissarlik. Gives an account of his various explorations at Sardes, Mount Siphylus, the Gygaen Lakes, etc.
- Stimulants in Use among Savages and among the Ancients, Ethnological Hints afforded by the.** Miss A. W. Buckland. Journal of Anthropological Institute, XXVI.
- Stone Age in Kansas.** W. H. Lykins. Kansas City Review, October. 2 pp. Account of flint implements found in an old bed of the Kansas river, at Lawrence.
- Stone Age made their Implements, How our Ancestors in the.** B. B. Redding. American Naturalist, November. 8 pp. Similarity of stone implements in different parts of the world. Made without the aid of stone hammers, but flakes broken out by pressure. Some arrow-heads made in the writer's presence by an old Indian.
- Stone Mill at Newport, The Old.** G. C. Mason, Jr. Magazine of American History, September. 8 pp. Gives a survey of the mill, also sketches of the Leamington and Chester mills, and concludes that the Newport mill was built in the last quarter of the seventeenth century, and that Governor Benedict Arnold was the designer as well as the owner of the mill. He finds evidences of a second floor and staircase which has never been described before.
- Stone Mill at Newport, The Old.** G. C. Mason, Jr. American Architect, October 4. Explains in detail some statements made by writer in the Magazine of American History for September, especially in regard to the fire-places.
- Stones and Bones from Egypt and Midian.** R. J. Burton. Journal of Anthropological Institute, XXVI.

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## EDITORIAL NOTES.

1680 AND 1880: ST. ANTHONY'S FALLS AND HENNIPIN.—The two hundredth anniversary of the discovery of the Falls of St. Anthony will take place under the auspices of the Minnesota Historical Society, July 3, next. Among the historical papers to be read are the following: 1. Life of Hennepin and Catholic Missions, by Bishop John Inland. 2. The Indian Trade, by Hon. H. M. Rice. 3. Military Occupation, by J. V. D. Hurd. 4. Early French Explorers, by J. E. Ferte, M. D. 5. Protestant Missions, by Rev. S. R. Riggs, D. D. 6. Education, by Rev. E. D. Neill. 7. Civil Government, Gen. H. H. Sibley. 8. Our Commercial Interests, by Capt. R. Blakeley. 9. Agriculture, by Col. J. H. Stevens.

## EARLY MISSIONS AMONG THE CHOCTAWS.

The *Marietta Register*, Jan. 5, 1880, mentions the death of Mrs. Sophia N. Byington, the wife of the Rev. Cyrus Byington, of the Choctaw Mission, who died Dec. 21, 1868. Mrs. Byington was the daughter of Col. Ichabod Nye, one of the pioneers of Marietta. Her father moved to Ohio in 1788, and she was born in Campus Martius, (the stockade fort) of Marietta, Feb. 18, 1800. Mr. and Mrs. Byington commenced their labors among the Choctaws, on the Yazoo River, in 1831. In 1834, the Choctaws, with other tribes, removed west of the Mississippi. Mr. Byington translated portions of the Bible into Choctaw, and prepared a Choctaw grammar. Accounts of the Choctaws and Choctaw languages may be found in the *Panoplist*, the Connecticut magazine, and other missionary journals. But these two missionaries could have given to the world a fund of information concerning the tribe, which will probably never be secured.

## THE VENUS OF VIENNE.

The "Venus of Vienne" is known to students of ancient art as an antique dug up at Vienne, which represents, apparently, Venus in a crouching position but without head and arms. M. Felix Ravaisson connects it with figures on Bithynian coins of a crouching Venus, and with a passage in Pliny, which tells of the Bithynian sculptor, Daedalus, who made a "Venus at the Bath." He believes that in this statue we have a copy of the work of this Daedalus.

## LONGEVITY AND CIVILIZATION.

The *Pittsburg Christian Advocate*, Feb. 9, 1880, contains some pertinent remarks on this subject. The oldest tables of life kept in Switzerland, not many generations ago, showed the average to be about twenty-two years. Good French authorities now place it at about forty. This increase may be ascribed to civilization. Good scientific authorities assume that the normal length of life should be nearly one hundred years. Haller, the celebrated German Physiologist, Buffon, the Naturalist, and Flourens, the French Physiologist, uphold this conclusion. The normal life of all animals is five times the length of the period of their growth. The period of man's growth, especially for the consolidation of the softer part of the bones, according to Flourens, is twenty years. With the advance of genuine knowledge and civilization, there is a great increase of human comfort. Wild animals are subject to diseases, which they escape by domestication. The savage life is not free, by any means, from hereditary disease or from social vices.

It is proved that mental labor does not shorten life. Philosophers have the highest place in life tables, clergymen come next, and other professional men follow these.

## THE HISTORY OF MONEY.

\*The most rudimentary state of industry is that in which subsistence is gained by hunting wild animals. Accordingly, furs or skins were employed as money in many ancient nations. A passage in the book of Job has been cited as clearly implying that skins passed as money among the early Oriental nations. In the next higher stage of civilization—the pastoral state—sheep and cattle naturally form the most valuable and negotiable kind of property. In the Homeric poems, oxen are distinctly and repeatedly mentioned as the commodity by which other objects were valued. The grandson of Abraham bought land, and paid one hundred pieces of silver for it. The Greek word "pieces," as used in the text, means "lambs." The price paid for the land was one hundred "lambs" of silver. Each of Job's friends, on a certain occasion, brought him an "ear-ring," as well as a lamb, or "piece" of money. The silver was valued by the lambs instead of the lambs by the silver; the lambs, and not the silver, was the standard of value, for silver had not been "monetized." The early Roman coins bear images of cattle and sheep, and were called *pecunia*, money, from *pecus*, a flock of sheep or cattle. Our word "pecuniary" is, of course, derived from the same

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\**The Californian*, January, 1890. Article: What Is Money? By H. N. Clement.

word. Money was made out of jewels, not jewels out of money. The precious metals have been used as money in three forms, to wit: (1) as jewelry; (2) as money by weight; and (3) as coined money. There can be no doubt that the extreme brightness and beauty of gold and silver fascinated the early races of mankind, and caused the more rich and opulent of them to covet them as trinkets and jewels, long before they were used or conceived of as money. The Egyptian monumental paintings and inscriptions clearly prove that bracelets and rings were the usual forms in which gold and silver ornaments were worn among the earlier tribes and races of men. The transfer of money by weight arose from the unequal size of the rings, bracelets and ornaments, in which the precious metals were originally wrought.

Thus we find Eleazer of Damascus carrying to Rebecca "rings and bracelets of fixed weight." The "shekel" of the ancient Israelites was at first a standard *weight* of gold, silver, or copper, and not a coin as many suppose—the word "shekel" meaning weight in the Hebrew language. In Genesis (xxiii., 16), Abraham is represented as weighing out to Ephron "four hundred shekels of silver," *current money with the merchant*. Aristotle is our authority for the statement that the precious metals were first passed by weight or size. By gradual degrees, however, the ancient Aryan races abandoned the absurd and clumsy custom of weighing their money, and about the year 900 B. C. it seems to have occurred to Pheldon, King of Argos, that a stamp, guaranteeing the quantity and quality of metal, and thus fixing its value in relation to other commodities, would facilitate the transfer of gold and silver as money. That the ingenious Greek ruler fully grasped the idea of issuing coined money is extremely doubtful. Seals were familiarly employed in very early times, as we learn from the Egyptian paintings and the stamped bricks of Nineveh. Being employed to ratify contracts they came to indicate authority; and thus, when a ruler first undertook to certify the weights of pieces of metal, he naturally employed his seal to make the fact known. In a most interesting, as well as exhaustive, work by Mr. Humphreys, it is stated that "the earliest Greek coins were adjusted to some well-known and generally acknowledged weight or standard, and so received the name of *stater*, a Greek word signifying *standard*, and that this standard appears to have been a weight corresponding to two *drachmas* of silver." Although the coins of Argos bore the image of a lion, the early Roman coins were stamped with the rude caricature of a lamb or an ox.

†The progress of coins, from the condition of dumb tokens of barter to that of artistic symbolism and record in metal, is the most marvelous feature in the study of numismatics. The first art met with in coins was at their very invention about B. C. 800. These witness the first steps of artists in their efforts to copy figures of persons or of animals. On one side of such pieces we find the rude image, the reverse containing only a hollow square employed to hold the metal to the lower part of the die during the process of striking. Gradually, as the image on the reverse becomes disclosed and perfected, the sunken square of the reverse takes form in its turn and presently small objects are found therein. Now the field of the reverse becomes flat, and about the year 400 B. C., noble bas-reliefs, representatives of the Greek art about the time of Phidias Scopas and their cotemporaries, began to appear. The coins of that period are the finest monuments of numismatic art imaginable, and have never been equaled by those of any other people at any period of the world's history. During the long period of the reign of the Roman emperors, we are enabled by their coins to follow the progress of their art with fidelity almost day by day. Now a fatal decadence begins to display itself. The standard and level of art continue to lower until when Christianity first appears on coins, A. D. 312, art is almost at its ebb. At last the Roman coins come down to us covered with meaningless lines, performing a duty which is merely perfunctory.

\*According to Henin there are six grand chronologic epochs of coinage.

1. From the first invention of coinage to the time of Alexander I., 700 B. C.,

†Numismatic Journal, for October, on the relation of coins to the fine arts.

\*The proceedings of the American Philosophical Society, Philadelphia, January, 1880. Notes on the collection of coins on exhibition in Memorial Hall, by Henry Phillips, Jr., A. M.

to 454 B. C. This was the rudest epoch of the art. The legends were inscribed in the manner known as *boustrophedon*. 2. From the death of Alexander I to Philip II., 359 B. C. The art attained a very high perfection in Greece. 3. From Philip II. to Augustus Cæsar, 30 B. C. The arts reached their apogee. The *chef d'œuvres* of the skill of the ancients. 4. From Augustus to Hadrian, A. D. 111. The decadence of the art. 5. From Hadrian to Gallienus, A. D. 260. Great decline. 6. From Gallienus to the fall of the Eastern empire, A. D. 1453. The reign of barbarism.

The earliest of the Roman coins were of copper, issued by Servius Tullius, about six centuries before Christ. The coinage of silver, the denarius quinarius and sestertius was begun about B. C. 269.

#### COLLECTIONS OF COINS IN THIS COUNTRY.

There are several valuable collections of coins in this country. A loan exhibition in the Memorial Hall, at Philadelphia, has been described by Mr. Henry Phillips. Another also, the renowned Castellani collection, was on exhibition in the Art Building during the Centennial. In the Castellani collection were many rare coins.

Among these were, first, several *ingots* of copper, representing the first coinage of the Romans, and known in numismatics as *æs rude*. The word comes from the Sanscrit *AYAS*. Roman *AS*, designating unity; unity of weight, a pound, or unity of money, an *AS*. The *ingots* were always weighed, and they were kept in use among the Romans as late as B. C. 509. Second, a gold coin of Philip II., of Macedon. Laureated head of young Hercules; reverse, charioteer in biga with horses galloping; under them a serpent. Third and fourth, large gold medalions of Honorius and Placidia, struck at Ravenna after the sacking and burning of Rome by Alaric, A. D. 410.

Among the coins on exhibition, in the Memorial Hall, were several Spanish pieces which represent the times when the Carthaginians were forming settlements in Spain, at a period, at least, as early as B. C. 146, and perhaps long preceding that. The face in one coin has some resemblance to Assyrian features, but it is supposed to represent the Carthaginian Hercules. Another specimen is a coin from Corinth, which was issued as early as B. C. 480. It bears a Pegasus on it with the archaic letter  $\varphi$  koph or ancient Phœnician "K," a letter which is only found in those early Greek alphabets, but which has disappeared from the later alphabets. The most remarkable coin is one known as belonging to the so-called "incused" coinage of Magna Græcia. It is a very thin and flat piece bearing the same figure on one side in relief, and on the other intaglio or sunken. It is supposed to belong to the sixth century B. C. A coin from Tyre, belonging to the era of its maritime prosperity, B. C. 188, represents a rudder, the maritime symbol of the city, and a palm tree, which is supposed to be a religious symbol. Phœnicia is fabled to take its name from this tree, which in Greek is *ΦΟΙΝΙΞ*. The palm tree is supposed by Junian to be a phallic symbol. The palm tree was a symbol also in Solomon's Temple, and is supposed to have been quite wide spread.

The *Numismatic Journal*, for July, 1879, mentions the fact that a Roman architect, M. Stanjeni, has bequeathed to the museum of Rome nine thousand pieces of valuable coins. The rarest pieces are Tartar coins which are very ancient. A farmer in Zurich Canton, Switzerland, while removing some old stone fences in March, 1879, found a collection of Roman coins.

#### FOLK-LORE.

\*Folk-lore and mythological literature, old wives' fables! A singular subject to be made a matter of scientific investigation. As a subject for amusement it seems well enough, but that societies should be formed for

[The report of the American Numismatic and Archaeological Society of New York, 1879. Article on some coins of Castellani's collections, by G. Feuardent.

[The proceedings of the American Philosophical Society, for July and December, 1879, has an article on the collection of coins on exhibition at the Pennsylvania School of Industrial art, in Memorial hall, Philadelphia.

\*Antiquary, January, 1880.

its especial study seems strange. Sir Walter Scott found much that was curious in demonology and border minstrelsy and folk-lore, and other novelists have delighted in gathering legends and fairy stories, but in these days they are subjected to critical analysis and are studied in the interests of philosophy. Ever since the time when Sir Francis Palgrave called attention to the subject in the *Quarterly Review* and the *Athenæum*, in 1866, the correspondence from every part of the world has increased, and now there is scarcely a tribe, however rude, or a nation, however cultivated, but that has been searched for these mysterious tales. Dr. Edward B. Tylor, Sir John Lubbock and Max Müller have written upon this subject, and it is now regarded as one of the most important branches of anthropology. Not only are primitive customs, such as are connected with marriages, deaths, births, etc., but the inter-tribal relations and primitive political life are illustrated by these fragments of tradition. For comparative mythology, especially, the folk-lore of the ruder tribes is an unfailing source of information. The organization of societies, whose object it is to gather up all that has appeared in print, or to preserve all the tales which may be learned, may be hailed with satisfaction. Such societies exist already in England, in Germany and in India, and we hope that the day is not far distant when some such organization will exist in America. There is especial need that the traditions of the native tribes of this country should be preserved, since the people who possess them are fast losing all traces of them.

#### MYTHOLOGY.

\*The study of comparative mythology, which is closely connected with Folk-Lore, we are happy to notice, is about to take a new departure. It is no longer a mere subject for amusement, or one by which the display of great learning could be made, but one to which much critical and historical investigation has been given. We are happy to call attention to the work done in this line, especially by Prof. R. B. Anderson, in Scandinavian, and to that of H. H. Bancroft, in the North American mythology.

There are few persons who have realized what wonderful beauty there is stored away in this hidden realm of thought, nor how much of history can be traced in this line.

Professor Anderson has referred to the resemblance of the Odinic myths to certain facts in Bible history, as well as to certain features of classic mythology. But he has ascribed this resemblance to a common origin, the different branches of Indo-Germanic or Aryan race having transmitted them from their primitive home in the East. The same resemblance, however, can be seen between the North American traditions and the same facts of Scripture, and in some cases even to classic mythology. These latter resemblances, many authors have been inclined to ascribe to the unconscious act of the missionaries and other persons who have gathered these traditions, the strange blending of Christian and Pagan ideas arising from the medium through which these traditions have been transmitted. But if this is so in America, and it is denied that the resemblances prove any historical connection between American traditions and primitive and classic tales, then the same reasoning might be applied, to a certain degree, to the Scandinavian myths. On the contrary, if the resemblances in the Scandinavian mythology are due to the fact that these stories were so well known in the earliest days of history before the different branches of the Aryan race separated, then we may suppose that the resemblance in the American mythology may be due to the fact also that these same stories were known to the ancestors of Turanian stock before they separated from the Aryan. There is this difference, to be sure, that the Turanian and the Aryan languages do not belong to the same stock and, therefore, the traditions cannot be traced in the direction of language, and it seems almost impossible that memory should transmit through so long a period, stories which belong to our first ancestors.

#### LATE DISCOVERIES.

A second Elephant Pipe, similar to the one described in Vol. II, No. 1 of the *ANTIQUARIAN*, will be described in a future number.

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\*The Younger Edda. Chicago, 1890. Native Races of the Pacific States, Vol. III.

A statuette, similar to those so common in Egyptian tombs, and called Osirids, was found in a small burial mound near Lake Harris, Sumter county, Fla. Pronounced by Prof. F. W. Putnam to be a plant.\*

A carved head in gravel, taken out from a well, in Dayton, Ohio. Correspondence of A. H. Brinkley, Alexandersville, O.

Carved images also in New Jersey. Dr. C. T. Wooley, Freehold, N. J.

Also a nodule of iron carved to represent a human face. A. P. L. Pease, Massillon, Ohio.

Rude pictures on rocks in a cave near La Crosse, Wis., described by Rev. Edward L. Brown, Salem, Wis., advanced sheets of Report of Historical Society of Wisconsin.

New Mounds in Lowndes county, La. Dr. H. C. Love.

## BOOK REVIEWS.

**THE NORTH AMERICANS OF ANTIQUITY: Their Origin, Migrations and Type of Civilization considered.** By John T. Short: New York: Harper Bros., 1880.

This book is a compilation of facts concerning a very interesting subject. Much has been written concerning the antiquities of America, but the difficulty has been that the information was scattered through so many works, and published in so many different languages, that no ordinary reader could find time and patience to gather it. Professor Short has done a very valuable service in searching through the various works, both old and new, and condensing the most important of these facts into a single volume. It must have required much time and labor, and no small amount of skill, to sift the wheat from so much chaff, and select just the things which the public needs to know. The task has been well done, and the book is a readable and interesting one. There has been need of just such a book for a long time, but no one has heretofore had the boldness to undertake the task.

One reason for this, perhaps, has been the want of an interest in the subject on the part of American people and the consequent chariness of publishers toward any book prepared on the subject. One thing at least will be learned from this work, that is, that the architectural ruins, the relics and other traces of the prehistoric races of America are fully as curious and interesting as are those of the buried races of the East. If books like the "Remains of Lost Empires," "The Land of the White Elephant," "The Light of Asia" and others are considered worthy of attention to American readers, the "North Americans of Antiquity" should also be. There are scattered all about this broad continent, such wonderful traces of a prehistoric population that it is strange that the subject has not enlisted more interest. We gather from this volume an idea of the wonderful variety and number of these remains. When one comes to look at them at a single view, such as is here presented, he begins to realize what a vast amount of material there is. The mounds of the Mississippi Valley, the Pueblos of Arizona, the ancient ruins of Mexico and Yucatan have, in a general way, been familiar to American people, but it is probable that few have ever known either the extent or the variety or the wonderful significance of these works. Each portion of our continent contains ruins which are unlike and distinctive. But it is not generally known what a great variety there is even in each geographical district. Professor Short has taken advantage of the researches of others, and by using the results of investigations in various localities, has been able to place before the reader very much that is really striking and very interesting. There is no attempt to reduce the subject down to a strictly scientific analysis, but the author has been careful in the collection of facts and presents a great amount of information. He also avoids vagaries and untenable theories and wisely abstains from expressing decided opinions, though at times he gives his own conclusions with sufficient definiteness to be suggestive. Some of his positions will probably be rejected by those who are making a specialty of the study, and certain facts are known to others which he has omitted, but this does not necessarily mar the value of the book. His attitude in reference to the

\*See The American Art Review, for April, 1880.

antiquity of man on this continent is conservative and cautious. While he is ready to accept the evidence of considerable antiquity, he by no means endorses the opinion of certain scientists who claim an extreme antiquity such as that man was preglacial, and existed in the tertiary period. Among the proofs of a considerable historic antiquity is one which seems quite forcible, that is, the influence of man upon nature. Certain animals were domesticated by the aborigines at so remote a period that scarcely any species were to be found in a state of unrestrained freedom at the advent of the whites. This is the case with the Llama of Peru. Certain species of plants, also, such as the maize, cotton, tobacco, have become so changed as no longer to be identified with the wild species, thus indicating a long period of domestication. Sir John Lubbock assigned 3,000 years as the period of occupation of this continent. Lyell maintained that 100,000 years might have passed since man made his appearance in America. The advocates for the preglacial existence at present in this country are Dr. C. C. Abbott, Professor A. R. Grote and others.

**THE SHELL MOUNDS OF OMORI:** By *Edward S. Morse, Professor of Zoology, University of Tokio, Japan.* Published by the University, 1879.

Shell mounds in various parts of the world have many things in common. They are generally characterized by refuse heaps of shells, broken bones and fishes mingled with various implements of horn, bone and stone, fragments of pottery and various animal remains. The shell heaps of Japan differ from those found in America as well as from the Danish Kitchen middens by the unusual amount of pottery and the great scarcity of stone implements, such as arrows and spear-points. One peculiar class of objects was found by Professor Morse, which he thinks bears some resemblance to certain relics which are found among the mounds of America. They consist of a series of clay tablets which resemble in shape, and somewhat in inscribed characters, the celebrated stone tablet found at Cincinnati called the "Geist" stone. There are also evidences of cannibalism found in these shell heaps as well as in those upon the coast of Alaska and Florida. Flattened tibie were discovered by Professor Morse resembling those which are so common in America where the hunter races prevail. The shell heaps described by this book are found about half a mile from the bay of Yeddo. The Danish mounds are several miles from the sea coast. It is the opinion of the author that the geological changes in Japan are the reverse of those in Denmark. The sea encroaching here, while on the Danish coast it has been retiring. The appearance of this book is somewhat of a surprise. It is published in English, the cuts and type seem to be also American. It contains eighteen folded pages of cuts, thirty-six pages of letter press. It is a neat quarto, and is creditable to the liberality of the government of Japan as well as to the scholarship of the author.

**MISCELLANIES:** By *John Dean Caton, L. L. D., Chief Justice of the Supreme Court of Illinois,* author of "The Antelope and Deer of America, and "A Summer in Norway." Boston: Houghton, Osgood & Co., 1880.

Judge Caton was one of the early settlers of Chicago, having become a resident of that place before its population numbered one hundred and fifty inhabitants and before even a village-incorporation had been established. The rapid growth of this city, and in fact of "the West," as it was then called, may be seen from the fact that less than fifty years ago "the wild grass grew and the wild flowers bloomed" where the Court House now stands. The wolves stole from their coverts by night and prowled through the hamlet hunting for garbage, and a black bear was treed and dispatched near where the Rock Island depot is now located. The only hotel at that time was a log house which was situated in the middle of the square just north of where the Tremont House now is. In the attic of this house there were seven beds in which fourteen slept. Judge Caton received his first office, as the gift of the people, in 1834, being elected as Justice of the Peace. But 219 voters in 1834—63,488 in 1876. He resigned the Chief Justiceship in 1864 and has given to the world this volume as the fruit of his leisure time. The book is a general *resume* of the adventures, experience and observations at the hut and elsewhere during a public life of fifty or sixty years. Many of the chapters (i-xii) are papers which were originally read before the Chicago Historical Society and the Ottawa Academy of



Science; the remaining chapters (xii-xxii) are made up of letters from various localities, such as the Sandwich Islands, Cuba, the Yosemite Valley, and other places which the author has visited. The chapter which has most interest to us, and which would be of greatest value to our readers, is one entitled "The Last of the Illinois." The author had the opportunity of frequently conversing with certain Indian Chiefs who were familiar with the various tribes who once inhabited the region about Chicago and northern Illinois. Among these was one who had witnessed that great conflict, in which the once powerful tribe of Indians from which the State of Illinois takes its name, was exterminated. This was at Starved Rock, and took place somewhere between the years 1766 and 1770. This fearful slaughter and extermination of the tribe was accomplished by the two northern tribes, the Pottawottamies and the Ottawas. It is said that the motive for the deed was revenge for the death of Pontiac, who was an Ottawa Chief, but who was also the idol of the Pottawottamies. A century before, just at the time when the far-famed French La Salle was taking possession of the Mississippi Valley in the name of the French Empire, these tribes of the Illinois had been attacked by the fearful Iroquois, and suffered a slaughter which well nigh destroyed them. Now in the interval between the French war and American revolution, just after the French Dominion had been withdrawn, their extermination was completed. The celebrated Pontiac's conspiracy had ended in disappointment to these northern tribes. Pontiac was slain by a member of the Illinois tribe, and the whole northern confederacy thirsted for revenge. So reduced had the Illinois become that these people whose name had been mentioned with respect from Lake Superior to the mouth of the Ohio, and from the Mississippi to the Wabash, found a sufficient space for refuge in the half acre of ground which crowned the summit of Starved Rock. Here they were besieged until starvation stared them in the face. They sought to escape, taking advantage of a dark and stormy night, but were overwhelmed by numbers and slaughtered without mercy. Eleven warriors only escaped. These, seizing canoes, rowed for their lives day and night while pursued by their enemy until at last they reached the fortification of the whites at St. Louis, under whose protection they placed themselves. The Pottawottamies took possession of their territory and continued to occupy it until after the advent of the white settlers. Judge Caton also traces the history of this tribe, the Pottawottamies, from their early residence in the North, near Green Bay, through their various migrations and adventures until the time of their removal. He mentions the fact that the tribe was, at an early date, divided by their migrations into two distinct parties, the one party which took the direction toward the southeast, by way of Lake Huron, and so scattered through the forests of Michigan, being called the *Wood Indians*. Those who migrated along the shore of Lake Michigan, into the open country of Illinois, being called the *Prairie Indians*. The latter he maintains were the wilder and fiercer of the two, more unsettled in their life and more degraded in their habits. The author was an eye witness of a great war dance performed by 800 of this tribe in the streets of Chicago in 1837. The description of this and other scenes which belong to the early history of Illinois at the time when the wild Indians were still remaining, and the wild deer were being hunted through thicket and prairie, and where the pioneers were experiencing many a strange adventure are very vivid. The memory of such scenes is worth perpetuating. We are glad that Judge Caton has had the wisdom and courage to have them published.

**OUR EARLY EMIGRANT ANCESTORS:** The original lists of persons of quality \* \* who went from Great Britain to the American plantations—1600-1700. Prepared by S. W. Deane, Boston. Edited by John Camden Hotten, New York. J. W. Bouton, 706 Broadway. 1880.

This book contains all the lists of passengers to America yet found in the British State Paper Office, besides other lists of settlers in the British American colonies. These lists, however, contain but a small portion of the actual settlers in the colonies. New England is more fortunate in this respect than other parts of the country; but, even here, it is not known in what vessel, at what time, nor from what place, a vast majority of the people who settled here in the seventeenth century came. Of not a single vessel of the fleet of seventeen which came in 1680, the year that Gov.

Winthrop arrived, is a list of passengers proven to exist. It is not probable, though, that much information of this kind will be added to that in Mr. Hotten's book, except by patient gleaning from scattered sources.

The late Hon. James Savage, author of the *Genealogical Dictionary of New England*, who visited England in the summer of 1842, was the first to bring the lists in the State Paper Office, to the attention of Americans. He copied and printed those then accessible in the collections of the Massachusetts Historical Society (3d Series, vol. 8). Additional lists were afterwards discovered and printed in the *Historical Collections* and the *New England Historical and Genealogical Register*.

Subsequently the celebrated antiquary, Samuel G. Drake, A. M., spent over a year (1858-1860), in England, and copied all the lists he could find. These he printed, in 1860, in a volume entitled "*Result of Some Researches in the British Archives for Information relative to the Founders of New England*." Nearly all the matter in Mr. Hotten's volume relating to New England, will be found in Mr. Drake's. The rest of this volume, except the "*Lists of the Living and Dead in Virginia*," we believe, was first printed by Mr. Hotten in the first edition of his work, which appeared in 1874. It may be stated that in the fourteen years between the publication of Mr. Drake's book and Mr. Hotten's, only one New England list was discovered. Mr. Hotten died before the publication of his volume. We do not perceive that in the more than five years that have since elapsed, his editors have been able to add a single list to any part of the volume. We have, therefore, probably here all that can at present be obtained.

The book is handsomely printed on fine paper, and we are assured that great care was taken in copying the names from the originals. It has a valuable introduction, and every name is indexed. J. W. D.

INTRODUCTION TO THE STUDY OF SIGN LANGUAGE AMONG THE NORTH AMERICAN INDIANS, AS ILLUSTRATING THE GESTURE SPEECH OF MANKIND. By *Garrick Mallery, Brevet Lt. Col. U. S. A.* Smithsonian Institution, Washington, D. C.

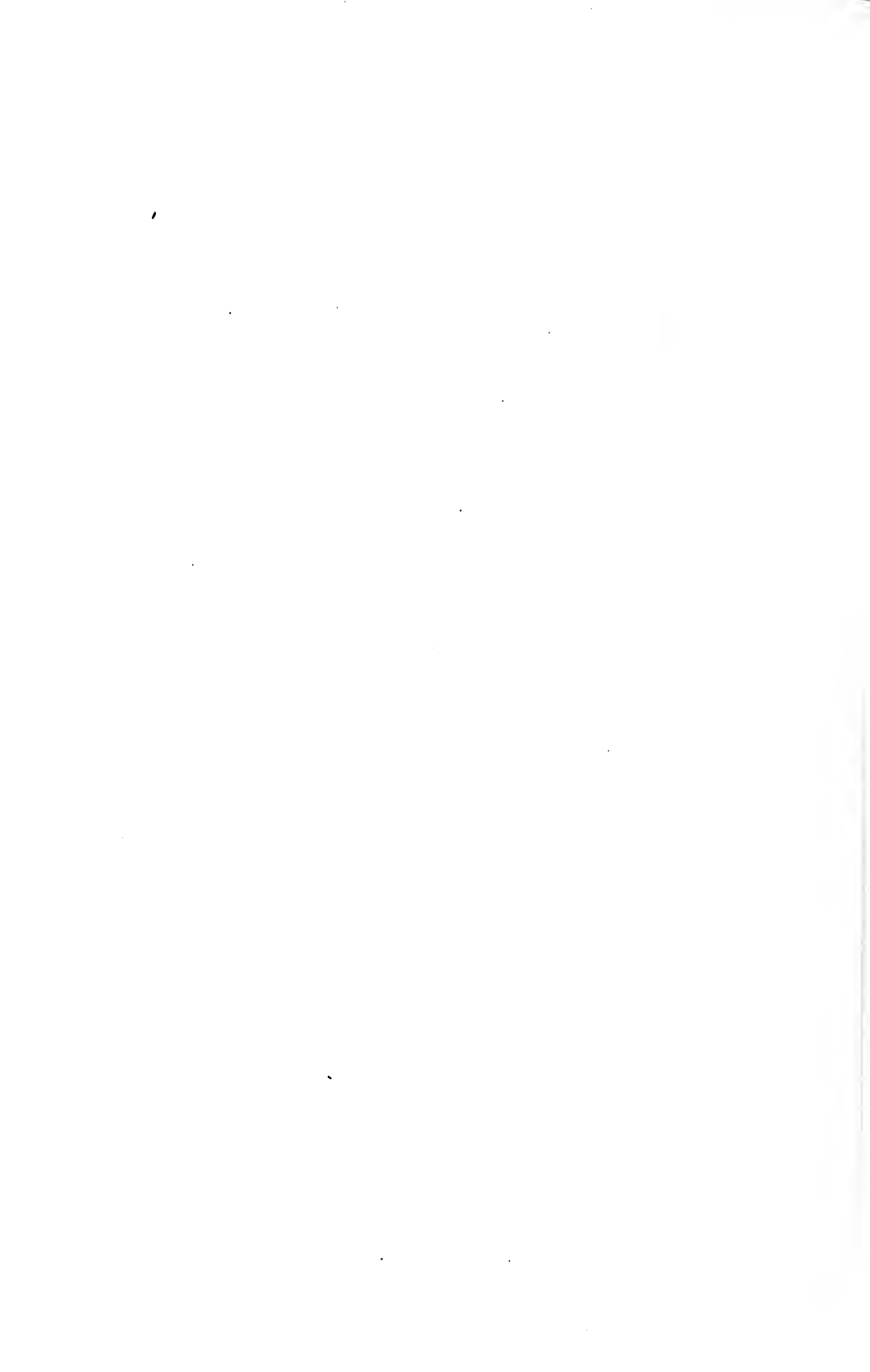
This work is the forerunner of a larger work upon sign language, in preparation by the Bureau of Ethnology in the Smithsonian Institution. The opinion expressed by Dr. Edward Tylor in "*The Early Researches of Mankind*" prompted the inquiries embodied in this book. By careful comparison of lists of signs, taken under various conditions, at widely different times and places, the author has endeavored to show that there may be a gesture language which may be understood by all races. He does not maintain that there is a universal sign language in absolute use anywhere, but as gesture is as natural to the human race as speech, he thinks that it may become the basis of a common language. The reproduction of gesture lines in the pictographs made by the Indians he regards as a great aid to the study of sign-language, and maintains that there may be an analogy between these as the pictures of gestures and some of the characters in the Mexican, Chinese, Assyrian, and Runic alphabets, and also with the Egyptian hieroglyphs. The further our language has been developed, and the more the primitive significance has been lost, the fewer points of contact will it contain with signs. But with the rude savages which are so near the primitive state, and who are the mere children of nature, the sign language may be found which possibly may even interpret the ancient phonetic characters. The corporeal movements of the lower animals are certainly expressed in the attitudes of savages in their dances, and it is probable that human emotions and many subjective ideas are expressed in a most natural manner by these rude people. The author has placed together in this volume a large number of descriptions of signs, which have been gathered from at least twenty-one different authorities, most of whom were associated with the Indians at various times. The dates of these observations extend from 1831 to 1880, and the tribes from which they were collected extend from the Mississippi to the extreme northwest of this continent. It has been maintained by some that all the tribes of North America have in use a common and identical sign language, by which they can communicate freely. The author does not endorse the opinion, yet concludes that a sign language can be adopted which will be understood. Hence the volume. The book is an original contribution to science, and is very valuable.

## NEW BOOKS.

*Revue de Linguistique et de Philologie comparée. Recueil trimestriel publié par Girard de Rialle. Paris, Maisonneuve & Cie. Octavo.*

This is one of the few European magazines dealing almost exclusively in the study of those languages, which do not belong to the Indo-European family, and for the majority of which a literature has yet to be created. At the head of the staff of contributors to the *Revue*, which is very ably conducted, and has, with 1879, reached its twelfth year, we see Mr. Emile Picot, and Mr. Julien Vinson, a linguist deeply engaged in publishing all what is known concerning the Basque dialects of the Pyrenean mountains. In the fourth number of the *Revue*, Mr. Vinson reproduces a religious Basque poem of 20 short stanzas, recently discovered, and worded in the Navarra dialect, and has added to it a French translation, with commentaries. In the same number we also find a grammatic sketch of the Goa dialect, spoken along the western coast of the East India peninsula, south from Bombay for about six degrees of latitude; and a grammar of the idiom of the Samoan islands, by the missionary L. Violette. The Goa language is a dialect of the Mahrâthi, largely mixed with Neopersian elements; it belongs to the Sanscrit branch of the Indo-European family, and is spoken in the Conkan territory. The Samoan is a dialect of the Polynesian branch of the great Malay-Polynesian family of languages. In these two sketches the languages spoken of are treated in a manner that in many respects is decidedly unscientific, but we understand very well that the editors had to print the manuscripts just as they received them. The anonymous author of the Goa grammar gives no enumeration or classification of the sounds composing this dialect, and the Samoan grammarian introduces himself with the statement: "Having discovered that Samoan has more resemblance with English than with French, I have followed the divisions of an English grammar." Cannot the English language be treated by following a dozen divisions, all different among themselves, and all scientific? And since every language follows its *own laws*, why not find out first these laws, and then construe a grammar while taking these for a basis? We miss f. i. a separate chapter on the various kinds of syllable and word-reduplication, a feature which in all Malay-Polynesian tongues is of as great importance as the *Ablaut* or *Guna* is in the Indo-Germanic languages; it is mentioned only incidentally. The different articles described by Violette as definite and indefinite *articles* rather seem to be demonstrative pronouns, and what he says of the existence of three genders proves that this language makes no distinction of genders at all by grammatic forms. The author is very reticent about the derivation of words by affixation, which plays such an important part in the grammar of every polysynthetic language.

Imperfections of this nature do not detract in any way from the ability and zeal of the *editors* of the magazine, and we regret that America possesses no periodical, exclusively devoted to linguistics of this character, for on the western hemisphere there is as much work on hand for describing *scientifically* and publishing in appropriate shape all the known, half-known and unknown Indian languages, as there is, perhaps, in the whole of Asia. Now America has to go to France and other European countries for the study of many of the languages spoken on her own territory. American languages described and discussed in the twelfth vol. of the *Revue de Linguistique* are the male and female dialect of the Carib, by Lucien Adam (reviewed in last No. of *ANTIQUARIAN*), the Galibi language, by Dupont; the Ale-ut language, by V. Fleury, the male and female dialect in Chiquita (South America), by the same writer; Nagranda-French vocabulary, by A. Schoebel; notices on languages spoken in New Granada (South America), by X. ....





THE CHINESE WALL.

# THE AMERICAN ANTIQUARIAN.

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## THE PICTURED CAVE OF LA CROSSE VALLEY, NEAR WEST SALEM, WISCONSIN.

First published by the Historical Society of Wisconsin.

BY REV. EDWARD BROWN.

This curious cavern is situated on the farm of David Samuel, in the town of Barre, four miles from West Salem, and eight miles from La Crosse, on the northwest quarter of Section 20, of Township 16, Range 6. It was discovered in October, 1878, by Frank Samuel, a son of the owner of the land, eighteen years of age, who had set a trap for raccoons at a hole of considerable size in the hill. Finding that he could, with a little difficulty, crawl into the aperture, which had been dug by wild animals through a land-slide, at the foot of a cliff of Potsdam sandstone, he entered, and finding that it opened into a spacious cavern, he procured lights, and with two older brothers and a friend, explored it. They found the walls extensively covered with pictures and hieroglyphic characters, and charcoal paintings. It thus became known to a few neighbors, and a few boys, who in the winter resorted to it and built fires and carved their names and their own pictures.

About the first of June, 1879, I heard of such a cave with such pictures and characters, and immediately visited it. I quickly saw that there was something of much value to the cause of archæological science; that the rude pictures were evidently quite old; that the now close chamber had been an open cavern in the cliff, which had been closed, not less than 150 years, by a land-slide from the hill above. A poplar tree, two feet in diameter, having 120 growths of circles, stood as a dead tree 25 years ago, when Mr. Samuel first came there, and had rotted and fallen; and a birch tree stood upon the edge of the cliff where the land-slide had passed over, of from 150 to 160 annular growths. I visited Mr. Samuel and informed him of the value to science of the inscriptions and possible discoveries

to be made by digging. He immediately took measures to stop the vandalism that was fast destroying them; to enlarge the opening, and clear out the sand that had washed in from the land-slide and half filled the cave. In the meantime I took *fac similes* of the pictures and characters by pressing tissue paper into the grooves, and with black crayons followed each line to its termination, preserving also its original width. In this way I got perfect outlines; and by placing other sheets over them, in the light of a window pane, took small copies that showed the pictures in their original form and size. I sent one to Professor Chamberlin, State Geologist, not intending to make anything public till an examination had been made by an archæological expert, and their value to science ascertained. In the meantime, it having become noised about that I was examining such a cave, I was called upon by the local editor of the *Chronicle*, of La Crosse, to whom I gave copies of some of the most prominent of the pictures, from which hasty and imperfect wood-cuts were prepared, which appeared in the *Chronicle*. The article was seen by Mr. Lyman C. Draper, Secretary of the State Historical Society, who wrote to me for information in regard to it. I sent him copies of the pictures, so far as I had taken them, and designated a time—June 27th—to dig into the bottom of the cave, requesting him to come, or send a competent archæologist. He communicated with Dr. J. A. Rice, of Merton, Waukesha County, who came at the time appointed, with Mr. Rockwell Sayer of Chicago. A company of seventeen men repaired to the place, with shovels, wheel-barrows, and other necessary things for exploration. Several intelligent ladies also attended, and prepared a dinner.

Commencing at the back end of the cave, the sand was carefully dug up and wheeled out, every load carefully inspected, and the work continued till the whole had been examined. We came upon four layers of ashes, each from four to six inches deep, and containing charcoal, and burned and nearly vitrified sand-rock. They were separated from each other throughout the whole length and breadth of the cave by layers of clean, white sand, of from ten to fourteen inches in depth. Below the whole was water, of the same level as a marsh that lies in front of the cliff. The lower stratum of sand and ashes contained nothing. In the second were fragments of pottery made of clay and ground shells. These were smooth, and of the oldest kind found in mounds. In the third, more elaborately wrought pottery, the newest found in mounds; with numerous fragments and whole sides of Mississippi river bivalve shells, and a bodkin of bone, seven inches long. This, according to the opinion of old hunters, was of the "hock-bone" of an elk. It was in

dry, white sand, and is quite sharp and smooth with use, and in a perfect state of preservation, even retaining the glassy polish of wear and handling, as if used but yesterday.

All the layers had become compact and well stratified, and all contained bits of charcoal, and charred and rotten wood. In the upper layer we found two bones of birds, and two of small animals, and a "clue-claw" of a deer, and a cartilaginous inferior maxillary of a reptile. The four completely diffused strata of ashes, separated by a foot average of clear sand, showed that there had been four distinct periods of occupancy, separated by considerable intervals of time. This was also indicated by two orders of pottery, one always below the other; but nothing to measure the time. The only conclusion we could arrive at was, that the first occupation was very ancient, and the last before the land-slide, or not less than 150 or 160 years ago. The zone of the pictures agreed best, for convenience of engraving, with the third occupancy, the age of the figured pottery.

Before the land-slide, it was an open shelter cavern, fifteen feet wide at the opening, and seven feet at the back end. Greatest width, sixteen feet; average, thirteen; length, thirty feet; height, thirteen feet, and depth of excavation, after clearing out the sand of the land-slide, five feet. The pictures are mostly of the rudest kind, but differing in degree of skill. Except several bisons, a lynx, rabbit, otter, badger, elk and heron, it is perhaps impossible to determine with certainty what were intended, or whether they represented large or small animals, no regard being had to their relative sizes. A bison, lynx and rabbit are pictured in one group, all of the same size. One picture, perhaps, suggests a mastodon; another, the largest, a hippopotamus; but whether they were really intended to represent those animals is quite uncertain. Others seem to refer to animals yet in existence. Many pictures are fragmentary by the erosion of the soft sand rock on which they are engraved. In one place is a crevice eight feet long, two feet high, and extending inward two and a half feet, with fragments of pictures above and below.

The appearance and connection of the pictures and characters indicate that they were historical, rather than engraved for mere amusement, and suggest that thorough exploration of caves may yet shed much light on the history of the prehistoric Aborigines of our country.

While these representations are exceedingly rude, it is deemed best to preserve tracings of them, to subserve the investigations of archaeologists. They were made by placing thin paper over the engravings or paintings, pressing it down, and tracing the lines with crayons. The more important of them are herewith



subjoined, having been engraved by Messrs. Marr & Richards, of Milwaukee, in reduced size, with care and accuracy:

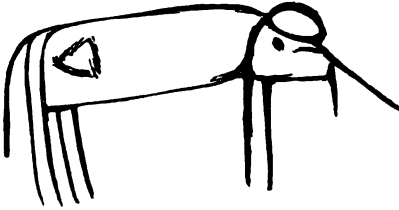


FIG. 1.

No. 1, perhaps, suggests a mastodon, and has the oldest appearance of any in the cave. The size of the original is sixteen inches long, by ten and a half inches from the top of the head to the bottom of the feet.

No. 2, perhaps, indicates a bison, or buffalo, and is the best executed picture of the whole collection. Its size, 19 inches long, by fifteen and a half inches from tip of the horns to the feet.

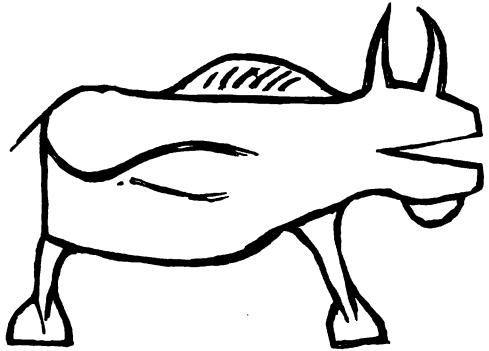


FIG. 2.

No. 3, perhaps a hippopotamus — or, perhaps, a bear; the rear portion crumbled off, and the largest representation in the cave. It is twenty-

eight inches long, and thirteen inches from the hump to the feet.



FIG. 3.

No. 4, an elk with its hunter, whole length eighteen inches; the animal is ten inches long by fourteen from tip of front prong of horns to the feet; the Indian, partly defaced, eleven and a half inches high, by four inches from end of arms to the opposite side of the body. The weapon is nine by five inches.

No. 5 represents a hunter, with a boy behind him, in the act of shooting an animal with his bow and arrow weapon. The who e



representation is twenty-five inches long; the animal from tip of tail to end of horn or proboscis, twelve inches, and from top of head to feet, seven inches; the hunter eleven inches high; the boy four and a half.

FIG. 4.

No. 6 is a group of five figures, representing perhaps a bison, a lynx, a rabbit, an otter, and a rudely formed man—or possibly a bear in an erect attitude. The group, for the convenience of the engraver, is not arranged as in the cave—the figures in the original were in single file, covering a space of three and a half

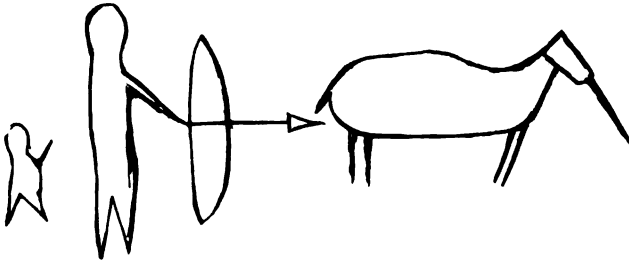


FIG. 5.

feet in length. The bison, the upper left hand figure, is twelve inches long, eight inches from top of the horns to the fore feet, and nearly ten inches from tip of the tail to the hind feet. The lynx, the lower left hand figure, is ten and a half inches from



FIG. 6.

the tip of the nose to the tip of the tail, five and a quarter inches from the tips of the ears to the fore feet, and eight inches from the tip of the tail to the hind feet. The otter, the upper right hand figure, is eight and a half inches from the tip of the nose to the end of the body, while the tail is seven and a half inches long; from the top of the rump to the hind feet, five inches; and four inches from the top of the shoulders to the fore feet. The rabbit, the lower right hand figure, is ten and a half inches from the nose to the end of the tail, five and a half inches from the top of the neck to the fore feet, and five and a quarter inches from the top of the rump to the rear hind foot. The upright figure, in the centre, is seven and a half inches tall, and three inches from the end of the arm to the back of the body.

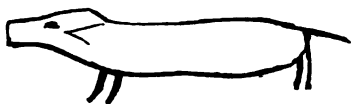


FIG. 7.

inches from the rump to the hind feet.

No. 8, an Indian painted on the wall, and the rude drawing of an animal cut in the rock—occupying the relative positions represented in the engraving. The animal is sixteen and a half inches from the lower extremity of the head to the tip of the tail, and seven and a quarter inches from the rump to the rear hind foot; while the Indian figure is ten inches in height, and nine and a half inches from the end of one arm to that of the other.

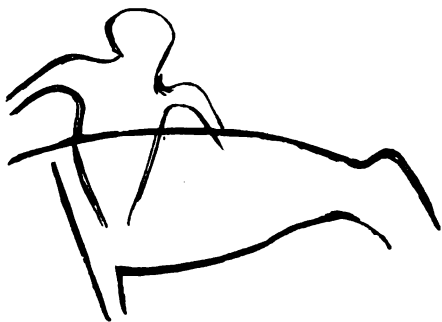


FIG. 8.

No. 9 represents a wounded animal, with the arrow or weapon near the wound. This figure is twenty-one and three-quarter

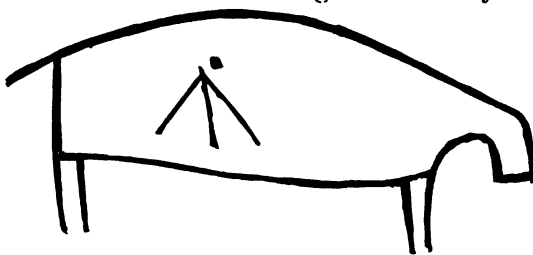


FIG. 9.

inches from the lower extremity of the nose to the tip of the tail; eight and three quarter inches from fore shoulders to front feet, and eight inches from the rump to the hind

feet. The weapon is four and a half inches long, by five inches broad from the tip of one prong or barb to that of the other.

It may be remarked that the two prongs or barbs of the weapon or arrow, in this figure, are doubtless altogether too long and disproportioned.

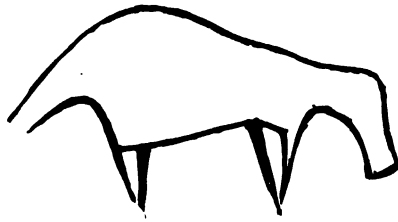


FIG. 10.

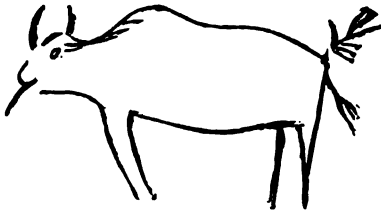


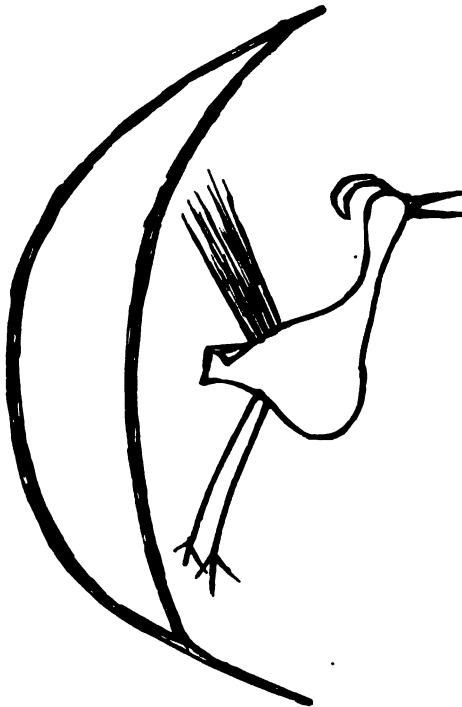
FIG. 11.

feet, six inches from the fore shoulders to fore feet, and four inches from top of the head to the end of the nose.

No. 11, probably a bison or buffalo, as the hump indicates, painted on the rock with some black substance. From the nose to the end of the body, eleven inches; eight and a half inches from the hump or shoulders to the feet, and seven and a half inches from the rump to the hind feet. As the tongue pro-

We are justified in this supposition, from the general fact of there being no recognition of the relative sizes of the animals represented in the several figures in the cave.

No. 10, an animal, fifteen and a half inches long, eight inches from top of rump to the hind



FIGS. 12 and 13.



FIG. 14.

trudes, the animal would seem to be in the act of bellowing for its fellows or its young.

No. 12, a heron; from end of bill to the toes, seventeen and a half inches, and four inches from the top of the back to the opposite part of the body.

No. 13, perhaps designed to represent a canoe, twenty-eight inches across from the extreme point to the other, and five and a half inches from the top to the bottom at the largest point.

No. 14, a chief with eight plumes and a war club; eleven inches from top of head to the lower extremity, and six inches and three-quarters from the tip of the upper finger to the end of the opposite arm. The war club six and a half inches long.



FIG. 15.

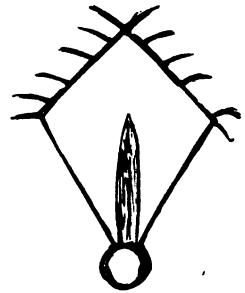


FIG. 16.

No. 15, implements or weapons; the engraving thirteen inches by nine—the one on the right, with a handle, eight and a half inches long; and the arrow beside it, nine inches.

No. 16, perhaps an altar, with its ascending flame; twelve inches in height, by nine wide.

No. 17, perhaps a representation of flames, as given in Quackenbos' School History of the United States, edition 1868, p. 24;



FIG. 17.

or it may be designed to represent ears of corn. Twenty-four inches in length by seventeen in breadth; the longest flame, or ear, ten and half inches, and an inch and a half thick; the smallest three inches long, and three-fourths of an inch thick.

WEST SALEM, Wis., July 2, 1879.

## THE THEOGONY OF THE SIOUX.

BY REV. STEPHEN R. RIGGS, LL. D.

Man that is woman-born grows up into a world of mysteries. The earth, the water, the air, are full of the incomprehensible. From many of the phenomena of the natural world, no familiarity takes away the strangeness, and no amount of education makes them comprehensible. The Sioux put their hands on their mouths, and say

WAH-KON !

In the mind of a Dakota or Sioux Indian, this word *Wah-kon'* (we write *wa-kan*), covers the whole field of their *fear* and their *worship*. Many things also that are neither feared nor worshipped, but simply *wonderful*, come under this designation. It is related by Hennepin, that when he and his two companions were taken captive by a Sioux war-party, as they ascended the upper Mississippi, one of the men took up his gun and shot a deer on the bank. The Indians said, "WAH-KON CHE ?" *Is it not mysterious ?* And from that day to this the gun has been called "MAH-ZA WAH-KON"—*mysterious iron*. This is shortened into "MAH-ZA-KON." The same thing, we may believe, was true, when, probably less than two centuries ago, they first saw a horse—they said, "SHOON-KA WAH-KON"—*wonderful dog !* And from that day to this, the horse has been called, by the Sioux, "wonderful dog," except when it is called "big dog"—SHOON-KA-TON-KA.

These historical facts have satisfied us that the idea of Great Spirit, ascribed to the Indians of North America, does not belong to the original Theogony of the Sioux, but has come in from without, like that of the horse and the gun, and probably dates back only to their first hearing of the white man's God. The Dakota word is, "WAH-KON TON-KA"—*Great Wah-kon—Great Mysterious*, or *Great Spirit*, so called. The same thing appears to be true in the Algonkin language; their "GITCHE MANITO" answers exactly to the Dakota *Wah-kon-ton-ka*, except that the adjective *great* has changed places.

If this statement, in regard to the origin of the idea of Great Spirit, be true, as we believe it is, then, when we came to preach

the gospel, and give the Bible to the Sioux in their own language, we simply *claimed our own*, in using WAH-KON-TON-KA for God. It is further to be observed, that, in the Dakota use of this word "wah-kon," some secondary ideas were worked out, as *sacred* and *consecrated*. Hence, in looking over the whole vocabulary, we found no word so fitting as this to represent "*holy*." In strict accordance with the usage of the language, before the missionaries came among them, a saved Dakota, in speaking of the *four living ones* of Revelation iv, 8, would cry, "WAH-KON, WAH-KON, WAH-KON! JEHOVA WAH-KON-TON-KA," etc. So, also, in designating the Holy Spirit, we have used WO-NE-GA WAH-KON—breath-holy.

#### TAH-KOO WAH-KON.

This is a general term, including all that is wonderful, incomprehensible and supernatural—"what is wah-kon;" but especially covering the objects of their worship. Until used in reference to our God, it is believed the phrase was not applied to any individual object of worship, but was equivalent to "the gods."

First among the ancient gods of the Sioux, and the only one to whom they ascribe any curative arts, should be mentioned the

#### OONK-TAY'-HE.

This is their Neptune, or "god of the waters." It does not seem to be *one*, but *many*, as it is spoken of as both male and female, and is said to inhabit all deep waters, and especially all great water falls. Two hundred years ago next September, when Hennepin and Du Luth saw the Falls of St. Anthony together, there were some nice buffalo robes hanging there as sacrifices to Oonk-tay-he, the god of the place. One of these Hennepin's man appropriated, for which act he received a reprimand from the trader, as it was theft and sacrilege; but the Franciscan justified him, on the ground, as he said, that these sacrifices were not real worship, but only a superstition of the savages! Nevertheless, these robes and other sacrifices represented the best worship they could give to one of their chief divinities. The reason of their sacrifices is fear. Indians are not so likely to be drowned as white men; but sometimes they do lose their life in the water. In that case the Wah-kon in the water is angry. Years ago Mr. Thomas Longley, and six years afterwards, Rev. Robert Hopkins, were drowned near the same place in the waters of the Minnesota. The Indians comforted us by saying that the Oonk-tay-he drew them under because he disapproved of our making a mission station at Traverse des Sioux.

The word Oonk-tay'-he defies analysis, only the latter part giving us the idea of *difficult*, and so nothing can be gathered from the name itself of the functions of the god. But Indian legend generally describes the genesis of the *earth* as *from* the *water*. Some animal, as the beaver, living in the waters, brought up, from a great depth, mud to build the dry land. According to the Dakota cosmogony, this was done by the Oonk-tay'-he. And why not worship, that is, offer sacrifices, to the creator of the world ?

As living in the waters, the form of the Oonk-tay'-he would naturally be that of a fish. He is the autocrat of all the fishes. So likewise the god of the air, that is the chief natural observed *force* in the physical heavens should be the chief of all the flying fowls,

#### THE WAH-KE'-YAN.

This word is the absolute form of the verb which means *to fly*, and hence it is the appropriate name of the great THUNDER BIRD. It is said to exist in four varieties, of *black*, *yellow*, *scarlet* and *blue*. These varieties differ in the length and joints of the wings—some of them having as many as eight joints. When the Wah-ke'-yan flies, "he utters his voice" (Wah-ke-yan ho-ton), and the lightnings zigzag from his eyes. As with us, the Dakotas have a separate name for the lightning—WAH-KON'-HDE, *the mysterious comes home*. We say it is the lightning that kills folks; the Dakota says it is the thunder. We go behind the *flash* and the *roar*, and say the *force* is electricity. The Dakota does the same, and calls the *force* Wah-ke'-yan, "The Thunder Bird." Nothing is more common than drawings of Wah-ke'-yan on their tents, on their shields, and sometimes on their bodies. For the circle dance they cut an image of the great bird from bark, and suspend it at the top of the central pole, which is shot to pieces at the close of the dance. Sacrifices are offered to the Thunder God, and songs are sung, both to the Wah-ke'-yan and the Oonk-tay'-he.

#### SPECIMENS OF SONGS:

##### I.

I sing to a Spirit;  
This is the Thunder.

##### II.

Lo! a cloud is let down from above:  
Father! shall I fly upon it?

##### III.

This wah-kon I whirled!  
This wah-kon I whirled!  
This house I levelled!  
This wah-kon I whirled!  
This house I levelled!  
This wah-kon I whirled!



This represents the progress of a whirlwind and thunder storm. The following are sung to Oonk-tay-he, which is the patron god of the Society of the Sacred Dance:

## I.

Across the lake mysteriously I lie;  
Across the lake mysteriously I lie;  
That decoying some soul,  
I may eat him alive !  
So may it be.

## II.

Grandfather made me mysterious medicine;  
That is true;  
Being of mystery, grown in the water,  
He gave it me.  
To grandfather's face wave the imploring hand;  
Holding a quadruped, wave the imploring hand.

## III.

In red down he made it for me;  
In red down he made it for me;  
He of the water, he of mysterious countenance,  
Gave it to me,  
Grandfather !

The god is called Grandfather: the quadruped is the "medicine sack" used in the dance.

What shall be the Dakota's god of the earth? He looks abroad, and sees nothing so *hard* and *indestructible* as the *rocks* and *stones*.

The IN' YAN or TOON-KAN', shall then be the symbol of the greatest *power* or *force* in the dry land. And these came to be the most common objects of worship. Large boulders were selected and adorned with red and green paint, whither the devout Dakota might go to pray and offer his sacrifice. And smaller stones were often found, set up on end and properly painted, around which lay eagle's feathers, tobacco and red cloth. Once I saw a small dog that had been recently sacrificed. In all their incantations and dances, notably in the circle dance, the painted stone is the god supplicated, and worshipped with fear and trembling.

But there is a form of the Wah-kon, which jugglers, so-called medicine men, and war-prophets invoke, which is called TAH-KOO-SHKAN-SHKAN, *the moving god*. In the estimation of the Dakotas, this is by far the most powerful of their gods, and the one most to be feared and propitiated, since, more than all others, it influences human weal and woe. It is supposed to live in the *Four Winds*, and the *Four Black Spirits of Night* do its bidding. The consecrated spear and tomahawk are its weapons. Moreover, the buzzard, the raven, the fox and the wolf, with other animals, are its lieutenants, to produce disease and death. Shall not sacrifices and prayers be made to such a power?

## SPECIMENS OF THE MEDICINE MAN'S SONGS:

## I.

This mysterious medicine I take !  
 This mysterious medicine I take !  
 May this man mysteriously recover !

## II.

Something have I in my breast !  
 Something have I in my breast !  
 A snake have I in my breast !  
 Something have I in my breast !

Or, if the medicine man wants to kill some one by his magic,  
 he sings this song:

The two-legged one whose face I admire;  
 The two-legged one whose face I admire;  
 In his face may I shoot him !

Take some examples of the war prophet's songs:

## I.

I have cast in here a soul;  
 I have cast in here a soul;  
 I have cast in here a buffalo soul;  
 I have cast in here a soul.

## II.

I make my way with my face covered;  
 I make my way with my face covered;  
 The people are buffaloes;  
 I make my way with my face covered.

The "buffalo soul" in the first song is explained by the second song.

## III.

Night now passes along !  
 Night now passes along !  
 It passes along with a thunder bird !  
 Night now passes along !

This is a terrible vision. The black Spirits of Night pass along with thunder birds in their mouths. One can imagine it something like the night when Saul was with the witch of Endor !

The anthropomorphism of the human race naturally imagines and requires a *god* like unto man, even if it should be an embodiment of his *contrarisms*. Such an one the Dakotas have in

## HA-YO'-KA.

This is the *anti-natural god*. It is said to exist in four varieties, all of which have the form of a small man, but all his experiences and desires are contrary to nature. In the winter he stands on the open prairie without clothing; in the summer he sits on a knoll, wrapped in a buffalo robe, and freezes. He has in his hands, and on his shoulders, a bow and arrows, and

rattles and drum. All these are surcharged with lightning, and his drum-stick is a little thunder-god. The high mounds of the prairie are the places of his abode. He presides over the *land of dreams*, and that is the reason why dreams are so fantastic and unreal. Of course no god has more to do with human character and destiny.

The *armor-god*, and the *god of the mystery sack*, are sometimes spoken of as if they were individual and separate divinities. But they seem rather to be the *god-power*, which is put into the *armor* and *sack*, by this *consecration*. They should be regarded as the *informing* and *indwelling* of the OONK-TAY-HE or the TA-KOO-SHKAN-SHKAN. A young man's *war-weapons* are *wah-kon*, and not to be touched by a woman. A man prays to his *armor* in the day of battle. In the consecration of these weapons of war and the hunt, a young man comes under *taboo* restrictions. Certain parts of an animal are *sacred*, and must not be eaten by him until he has killed an enemy.

The SUN and the MOON are worshipped by the Dakotas in the *Sun-Dance*; and occasionally a man swears by them, as in the formula, "Toon-kan-she-na na-ma-hon," *grandfather hears me*."

A people who feast themselves so abundantly as the Dakotas do, when food is plenty, would necessarily imagine a *god of gluttony*. He is represented as extremely ugly, and is called E-YA. He has power to twist and distort the human face, and the women still their crying children by telling them that the E-ya will catch them.

There remains to be named only one more,

CHAN-O-TE-NA.

This means *dweller in the woods*. Sometimes he is called OH-NO-GE-CHA," which would seem to assign him a place in the tent. Whether these are one and the same, or two, is a question in dispute. But they are harmless household gods. The *Chan-o-te-na* is represented as a little child, only it has a tail. Many Indian men affirm they have seen it, not in night-dreams, but in day-visions.

BELLOTT, WIS., Nov. 26, 1879.

## TEUTONIC MYTHOLOGY.

BY RASMUS B. ANDERSON.

A lively discussion in regard to the origin of Teutonic mythology has recently been commenced in the European press, and the most startling theories are being suggested.

According to the old theory, there was a time when all the Teutons, that is to say, the Germans, the Anglo-Saxons, the Danes, Swedes, Norwegians, etc., had a common mythology, when the kings among all their people traced their descent up to Odin and the gods of Asgard. The memory of this religion was wholly lost and we have no record of it in the medieval literature of continental Europe. England, Germany and the Scandinavian countries of the continent furnish us with legends, weird superstitions, and a vast number of folk-stories, all fragments of the ancient religion, but it would be impossible from these fragments to construct the wondrous mythological edifice of our forefathers. Indeed, had we only these traditions and popular tales and superstitions to depend on, nine-tenths of the system would be utterly lost and the remaining one-tenth would be incomprehensible.

Faithful Iceland is the Patmos where a record of the Teutonic religion was made and preserved to us, mainly in the Elder and the Younger Edda. The two Eddas are, so to speak, the Bible of the Odinic faith, and while the Elder Edda corresponds in many respects to the Old Testament, the Younger Edda is no less unlike the New Testament of the Christian Bible.

Ever since these Eddas were discovered they have been made the subject of extensive and critical investigation as to their origin and significance. Their genuineness and antiquity were disputed by the Germans, Schlözer, Adelung and Rühls, but the objections of these men had no lasting influence, and their learning was of so superficial a character that the raid they made on so precious a folk-treasure as the Eddas made no visible impression. Then came Jacob Grimm and his school and demonstrated to the world what power of reconstruction there is in intelligent scholarship and laborious research. When he brought daylight into the study of medieval literature and Teutonic antiquities, such stars as Schlözer, Adelung and Rühls vanished out of sight. The scholars of Germany, Scandinavia and England soon accustomed themselves to regard the myths of the two Eddas and the Latin version of old Norse ballads, by Saxo Grammaticus, as something very old, very national and as the

common inheritance of the whole Teutonic race. The Eddas and the Saxo Grammaticus were looked upon as the solid rock of Teutonism. The Eddas and Saxo were indeed regarded as a faithful mirror of the Teutonic religion as it developed itself in the north of Europe, but essentially the same gods were adored and the same forms of worship prevailed in the other Teutonic countries, so that while the Icelandic records gave a *perfect* picture of Scandinavian mythology, they also reflected with some degree of fidelity this old religion as it had existed in Germany, England and other Teutonic countries.

Just now a new raid is being made on this Odinic religion. Professors Sophus Bugge and A. Chr. Bang have recently proclaimed to the world that the Eddas are not an original Teutonic production. These scholars now present the startling claims that the *asa-faith*, of which we as Teutons have boasted so much, is all borrowed from Greek-Latin, Jewish-Christian and Keltic sources. Loke, they say, is Lucifer, Balder is Christ, his name being derived from the Anglo-Saxon Bealdor, meaning Lord. Angantyr is the Kentaur with the Keltic article *in* prefixed. Lodyn is simply Latona, etc. The Vala's Prophecy in the Elder Edda which has so long been looked upon as the most venerable morsel of literature from the hoary past of Teutondom now turns out to be merely a Norse version of the Sibylline oracles. The death of Balder is only a somewhat mutilated version of the crucifixion of Christ. Thus they, with rude hands, ruthlessly tear out scores of leaves from the works of Grimm, Keyser, Simrock, Holtzmann and other distinguished Teutonists, and tear up Teutonic chauvianism by the roots.

Mr. Bang is professor of orthodox theology, and as he recently published a large and exhaustive work on the historical evidence in regard to the resurrection of Christ, we might suspect him of a desire to make out a case in favor of Christianity. But Professor Bugge is one of the most profound linguistic scholars in all Europe. His researches in the field of mythology have given him a world-wide reputation; his edition of the Elder Edda, for instance, is the most scholarly one ever published, and he is in all respects a scholar so eminent that it will not do to question either his ability or impartiality. Professor Bang's lecture on this subject was published some time ago in Norway, and has already been favorably noticed by prominent scholars in Germany and in England. Professor Bugge's lectures have been but imperfectly reported, but the author is now publishing a revised edition of them to appear simultaneously in Norway and Germany, in March. When the work appears we may, indeed, look for a real mythological sensation in literature.

While Bang and Bugge now bring the question prominently to the attention of scholars everywhere, it may be worth our while to take a retrospective glance and notice what suggestions have been offered by other writers, suggestions that doubtless have not been without some influence on the minds of Bang and Bugge. Thus a Danish scholar, E. Jessen, has for several years with great acumen argued that the lays of the Elder Edda are indebted for much of their material, not only to German heroic songs, but also to Roman and Christian traditions.

In this connection Mr. Jessen points out with special emphasis the fact that words of Latin origin are used in the the Elder Edda. The eminent Norse scholar in Munich, Professor Konrad Maurer, expressed his doubts in regard to the antiquity of the Eddic rhapsodies more than ten years ago. Gudbrand Vigfusson, of Oxford University, an Icelander by birth, and editor of Cleasby's Icelandic-English Dictionary, recently published the *Sturlunga Soga*, one of the most prominent Icelandic Sogas, and in his elaborate *prolegomena*, he expresses the opinion that the larger number of the Eddic lays originated in the British Isles, while a second part were of Norse and a third of Greenland origin.

Professor Sars, in Norway, in his valuable history of Norway, published half a dozen years ago, called attention to the fact that the songs of the Edda must not be looked upon as the expression of an original and popular Teutonic faith, but they must be regarded as a product of the restless vikings, and that doubtless Christian ideas have greatly influenced their composition. Edzardi derives the Norse scaldic metre from the Irish,\* and in 1876 Henry Peterson published a work on the religion of the Norsemen, in heathen times, in which he tries to prove that the popular faith that prevailed in the North was one totally different from the one presented in the Eddas, and suggests that the latter is merely a mythological composition imported from Germany or England. It is but fair to say that it is these and other statements and suggestions that have stimulated Professor Bugge to make a careful examination of the whole subject and put it in a systematic and concentrated form within the reach of all who may be interested in the subject, and we look with impatience for the appearance of his work. Meanwhile we may take a look at the other side of the question.

It is a well-known fact that the Teutonic languages belong to the Aryan or Indo-European family of languages. With the telescope of comparative philology, we have been able to determine with certainty that the Aryan languages all have a com-

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\* Professor Rhys, of England, goes so far as to claim that the word Edda is of Irish origin.

mon origin. It is also reasonable to suppose that many of the social political and *religious* ideas and customs among the various branches of the Aryans have a common origin in the cradle life of the race. We do not say that the English word *mother* is derived from the Latin *mater*, but that both of these words have grown out of one common root. Thus when we find that a Norse tale or myth is very like a Greek. Roman or Keltic tale or myth, we cannot see that this necessarily proves that the Norse is derived from the Greek, Latin or Keltic. It may simply be evidence of a common source of the two. The similarity of Thor and Hercules, of Loke and Prometheus, of Balder and Patroklos, seem to me to be conclusive evidence that, when we go back far enough, Greek and Norse religions were one. Thus it is possible that the Teutonic Niblung story, the Greek Iliad and Odyssey, and the Hindooic Mahabhárata and Ramayana were, once upon a time, one and the same story, and the stories themselves may be found upon a careful examination to be not more unlike than the languages in which we now read them. Our readers must not for a moment suppose that the identity of Greek, Roman, etc., and Teutonic myths is a discovery just now made by Professor Bugge. The facts upon which Bugge bases his startling conclusions have long been recognized, and he is simply making a new application of them, while it may appear that he has added somewhat to the number of parallel myths. Already in 1859 the erudite German scholar Dr. J. G. Von Hahn published his "Mythologische Parallelen," which, in 1876, was embodied in his more elaborate work entitled "Sagenwissenschaftliche Studien." In this work he has pointed out more than twenty cases of identities of Greek and Teutonic myths, applying these to prove the common origin of the two mythological systems.

The mutual influence of the Christian religion and Teutonic heathenism upon each other has also long been understood by theologians and by mythologists, and it was especially emphasized by the great German scholar, Jacob Grimm. But it never occurred to him, when he found Christian elements engrafted on the decadent Odinic tree of faith, to suggest that the Balder-myth was taken root and branch from the Jewish Christian religion. That many of the ceremonies connected with the great festivals of the Christian church are of a Teutonic heathen origin we think all will admit. Is not the Christmas tree a shadow of the great ash Ygdrasil.

Thus it may be that while the great all-universe embracing ash-tree Ygdrasil when it had attained its full growth and was beginning to decay, had some new elements of life engrafted into its sap and fibres, especially by the Christian missionaries

and by the vikings who traversed all seas and lands, but that wonderful tree itself, with all its great branches towering to heaven and spreading over all the earth, has its roots in the cradle-life of the Aryan race, and has been nursed and sprinkled with the water of life by our stalwart Teutonic ancestors, and as such is a most precious inheritance. We warn our readers not to be *too hasty* in embracing the new doctrine now presented by Bang and Bugge, while it is not impossible, that, when we have read Bugge's great work, which is soon to appear, we will have to go over to his camp, bag and baggage.

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### HUMAN SACRIFICES IN ANCIENT TIMES.

*From the Anales del Museo Nacional de Mexico.*

BY SEÑOR MANUEL OROZCO Y BERRA.

TRANSLATED BY L. P. GRATACAP.

I reserve for another occasion the description of the horrid slaughter committed at the dedication of the great *teocalli* of Tenochtitlan, since the heart is saddened with melancholy at its relation and the mind bewildered in contemplating the excesses of the arrogant spirit of man; yet the opportunity appears to me propitious to raise a voice in favor of the American nations, defending them against the sweeping charges made against them in the name of the moral law, on account of their human sacrifices, and their so-called cannibalism. Already our compatriots Clavigero and Dr. Fernando Ramirez have spoken on this point and their enlightened works will serve me as a guide.

"There has been" says Clavigero, "no nation in the world which has not sacrificed human victims to the demands of its religion. The Bible tells us that the Ammonites burned up their sons in honor of their God Moloch, and that other peoples of the land of Canaan did the same. The Israelites at times followed these examples. It is stated in the fourth Book of Kings that Ahaz and Manassah, kings of Judah, used this Gentile right of offering up their sons in the flames. The expression of the sacred text appears to indicate rather a lustration or consecration than a holocaust; but the 105 Psalm leaves us no longer in doubt that the Israelites really sacrificed their sons to the gods of the Canaanites, the stupendous and striking miracles worked by the omnipotent arm of the true God not sufficing to restrain them from this barbarous superstition.



Of the Egyptians, we know by the testimony of Manetho, the celebrated priest and historian of that nation, quoted by Eusebius of Cesarea, that each day three human victims were immolated in Heliopolis to the goddess Sati Juno. It was not only the Ammonites, the Canaanites and the Egyptians that worshipped in so inhuman a manner their gods Moloch, and Juno, since the Persians had similar sacrifices to Mitia, or the Sun; the Phœnicians and the Carthagenians to Baal, or Saturn; the Cretans to Jove; the Spartans to Mars; the Phocians to Diana; the Lesbians to Bacchus; the Thessalonians to the centaur Chiron, and to Peleus; the Gauls, the Germans, and other nations to their tutelar deities. Philo says that the Phœnicians in their public calamities offered up to their cruel Baal, their most beloved sons; and Curtius affirms that the Tyrians did the same, up to the conquest of that famous city. Their compatriots the Carthagenians observed the same rite in honor of Saturn the Cruel, called so justly. We know that when they were conquered by Agathocles, king of Syracuse, in order to mollify their gods whom they thought were angered with them, they sacrificed two hundred noble families, likewise three hundred youth, who spontaneously committed themselves to the flames to give this proof of their valor, their piety towards the gods, and their love of country; and, according to Tertullian who, as an African, and only shortly subsequent to this period, should know, these sacrifices were used in Africa unto the time of the emperor Tiberius, as in Gaul up to the reign of Claudius, according to Suetonius."

The Pelasgians, ancient inhabitants of Italy, in obedience to an oracle, sacrificed the tenth part of their sons, as Dionysius of Halicarnassus states. The Romans, who were so sanguinary and superstitious, understood these sacrifices. During the entire period of the kings they immolated infants in honor of the goddess Maia, mother of the Lares, as a prayer for happiness in their houses.\* According to Macrobius, an oracle of Apollo counselled this practice. From Pliny we learn that up to the six hundred and fifty-seventh year of the foundation of Rome human sacrifices were not prohibited. Nor did the instances of this barbaric rite cease entirely, since Augustus, according to various writers cited by Suetonius, sacrificed in honor of his uncle Julius Cæsar, apotheosized by the Romans, three hundred men, part senators and part knights, chosen from the family of Antony, upon an altar erected to the new god.

Lactantius Firmianus, who was thoroughly acquainted with the Roman people and who flourished in the fourth century of our era, expressly says that also in his time these sacrifices were

\*A similar practice existed among the Mexicans, who on certain feasts offered to the gods infants dressed in flowers and borne on litters for this revolting ceremony.—*Translator.*

made in Italy to the Jupiter Latialis. Neither have the Spaniards kept themselves free from this horrible contagion. Thus, the Lusitanians sacrificed their prisoners, cutting off the right hand to consecrate it to their gods, observing their entrails and preserving them as auguries. All the inhabitants of the mountains sacrificed their prisoners with their horses, offering them up one hundred at a time to the god Mars, and speaking in general, it is said that it was peculiar to the Spaniards to sacrifice themselves for their friends. Similarly Silio Italica relates of his ancestors that when youth was passed, they killed themselves, and that, by so doing, received a eulogy for heroism.

Coming down to later times, P. Mariano speaking of the Goths who occupied Spain, says: "Since they were persuaded that there would be no favorable issue to the war unless human blood was offered up for the army's success, they sacrificed their prisoners of war to the god Mars, to whom they were particularly devoted, and at the same time they were accustomed to set apart for him the best of their booty, and to suspend from the branches of the trees the skins of those they slew." If the Spaniards who wrote the history of Mexico had not forgotten this, and had kept in mind what has happened in their own land, they would not have been so astonished at the sacrifices of the Mexicans."

Leaving Clavigero, we find in César Cantú, "Most people have sacrificed human victims. Phœnicians, Egyptians, Arabs, Canaanites, the inhabitants of Tyre and of Carthage, Persians, Athenians, Spartans, Ionians, all the Greeks of the Archipelago and of the mainland, the Romans, Ancient Britons, Spaniards, Gauls, all have been equally involved in that frightful custom. To gain the favor of the gods, the king of Moab offered up his son as a holocaust upon the walls of his capital, besieged by the Israelites, which deed caused so much terror to the besiegers that for the time being they raised the siege. It is impossible to repress a thrill of horror on reading those authors, both ancient and modern, who describe human sacrifices in vogue since the most remote ages and to-day practiced in India and in the interior of Africa. It is unknown who was the first that instituted this abominable barbarity, but whether it were Saturn as Pausanias appears to indicate, it is certain that this custom has deep and strong roots. The immolation of human victims was one of the abominations that Moses rebuked the Ammonites for. The Moabites sacrificed babes to the god Moloch, which cruel custom obtained among the Tyrians and Phœnicians, and the Hebrews borrowed the same from their neighbors.

We might add more but we content ourselves with quoting the following paragraph of Señor Ramirez: "In fine putting one side the only historic tradition that would conduct us in our

studies to a time more remote than that of the sacrifice attempted by Abraham, and regarding only those proofs which are preserved and that we can judge for ourselves, it is truly worthy of attention that the evidence as to the existence of human sacrifices is seen in monuments which in turn are unmistakable witnesses to the high civilization reached by the people who erected them. The stupendous ruins of Persepolis, that carry us so many ages beyond Alexander, have perpetuated in their magnificent relieves the memory of human sacrifices. The same is reproduced in the paintings found in the sepulchres of the kings of Thebes, leaving no doubt, says Baron Humboldt, that the Egyptians used these sacrifices. Examples of them are found amongst the ruins that cover the island Philæ or Philæ, whose finished relieves and carved marbles bring us to a more modern time, covering a period of five thousand years. In fine, the ancient and mysterious India shows us in the collar of human skulls which adorn the neck of the goddess Kali or Bhavani, as well as in the sculptures of the elephant, the practice of the mysterious discourses contained in their sacred books. For as far as concerns the peoples called modern, regarding them as the nursery whence emerged the nations that to-day carry the standard of civilization, it is very easy to show with their own history that not one of them has escaped that baptism of blood which forms one of the steps in the scale of social progress which none have the privilege to omit."

From the uniform testimony of authors it is to be inferred that the practice of human sacrifices has been common in the old and new world. Can we conclude from its universality that the custom is an excellent one? By no means; the repetition of a criminal act neither justifies or improves it. But it can be established that in raising a cry against the Americans for this atrocity, the Europeans commit an act of injustice and of reflection, attributing to them as a peculiar crime that which is as distinctively their own.

## PREHISTORIC RELICS OF LOWNDES COUNTY, MISS.

BY ALBERT C. LOVE, M. D., DONALDSONVILLE, LA.

During the summer of 1878, the writer devoted a few weeks of his leisure time to the study of prehistoric relics abounding in that portion of Lowndes County, Mississippi, which lies west of the Tombigbee river. Though his labors were not rewarded with as gratifying results as had been anticipated, yet the few facts ascertained are accounted of sufficient interest to justify him in preparing for publication a brief account of his discoveries.

The surface soil of the section of country explored is prairie, dark in color, and very fertile. In thickness it varies from a few inches to four feet. Underlying it, and resting on a basis of soft limestone, is a stratum of clay. This part of the country is drained by Magowah Creek which, flowing in an easterly direction, empties into the Tombigby at a point about fifteen miles below the city of Columbus. For a distance of fifteen miles this creek wends its way through a thickly timbered swamp whose width, regulated by the encroachments of cultivatable land, varies from a few hundred yards to four miles. The plantations drained by its tributaries are composed of high undulated lands, elevated points of which approach at places in close proximity to the borders of the swamp.

Such localities were to aboriginal man the favorite sites for habitation. Overlooking the swamp and creek, game and water were easily procurable. At such points, as well as, in the vicinity of mounds, there are, in most cases, found persimmon and walnut trees. This suggests the probability that the fruits of those trees were utilized as food and were collected for that purpose in considerable quantities at these much frequented spots.

Horse-shoe Prairie is a body of open land embracing several hundred acres drained by the headwaters of the Magowah. Near its centre is a group of post-oak trees of perhaps two centuries growth whose arrangement has given the prairie its name. The positions they occupy are so related to each other that, taken as a whole, they form a figure which so truthfully represents that of a horse-shoe that there is apparent to the casual observer evidence of design, and the candid inquirer is forced to conclude that they were planted by the hand of man.

From observations in this immediate neighborhood I was convinced that there are few places which have not been occupied by man. Though he has long since passed from the avenue of

action, and buried with him in his humble grave is the history of his life, yet scattered about the site of his deserted house are the works of his hands, fleshers, and arrowheads, and pottery, imperishable relics, giving us some idea of his tastes, his ambition and his pursuits.

The great number of his dwelling places argues that, in his time, the country, in certain localities was, more than at present, densely populated. Should a certain point on Magowah Creek be taken as a centre, and should a circle with a radius of one half of a mile be described, it would embrace no less than a dozen former sites of habitation. While some such points, with relics confined to a circumscribed area, give evidence of few inhabitants, there are others embracing many acres of ground, whose soil, intermingled with fragments of flint and pottery, that are significant of the past existence of large and populous villages.

#### POTTERY.

This is composed of crushed snail shells and clay, exhibiting in most specimens a small proportion of silica. Some specimens contain silica in greater abundance, while others are composed entirely of black prairie earth. All show evidence of having been hardened by the slow action of fire.

No vessel was found entire. If any were left on the surface of the ground, rendered fragile by the long continued action of the elements, they must have fallen into pieces or have been broken in some unaccountable way. The fact that all pottery found by myself in mounds and burial grounds was in fragments may possibly be explained by the usual cracking of the prairie soil during the autumn months. During long continued droughts it baked and separated, forming fissures which extend to great depths, thus endangering the integrity of fragile substances which lie in their course. In digging a cistern in a yard which had a few years previous been covered with pebbles, brought from a river-bed several miles distant, some of the pebbles were found intermingled with the earth at a depth of eighteen feet. The only reasonable explanation that my mind could give of the fact was that during a drought fissures were formed in the earth and the pebbles fell into them.

While the interior surface of fragments of pottery were smooth, the exterior were in most cases ornamented, each, no doubt, in accordance with the maker's artistic fancy and skill of manipulation. Some bore small crescent-shaped impressions, made with the long finger nails of the potter, others, small circular ones, having in their centres rounded prominences, apparently the imprints of a reed cut near its joint, some from the impressions they bore gave evidence that they were shaped in

baskets make of twigs, others, that they were encased in bark, and others still, that they were fashioned altogether by the potter's hands, bearing on both surfaces the imprint of his fingers. Rectilinear and curvilinear chasings, evincing artistic design and skillful execution, were found on some specimens.

#### BURIAL GROUNDS AND MODES OF BURIAL.

Hillsides appear to have been the favorite sites of burial grounds. Three explored by myself were so situated. They were not marked by elevations on the surface of the grounds. Perhaps the fact of their similarity of situation may be accounted for by the greater detrition of surface soil in such localities, caused by heavy rains. The graves are thus in part deprived of their covering of earth, and their discoveries from accidental causes rendered more probable.

Six skeletons were exhumed from burial grounds, but with very unsatisfactory results. The great proportion of carbonate of lime in the composition of the soil renders it impossible for osseous structures buried in it, and afforded no protection against its action, to maintain their integrity for a long period of years. The organic parts of bone is soon destroyed. On removing the superincumbent earth the long bones of the extremities were in most cases found in a fractured condition due to previous fissures in the earth, while the short and irregular ones, by reason of the earthy condition to which they were reduced by deprivation of their organic constituents, could not, with the greatest pains, be removed in their entirety.

In June, 1877, a plowshare laid open a grave on the lands of my brother, D. C. Love, Esq. I was called to examine it and found it to contain three skeletons, one of a child and two of adults, most probably those of a man and a woman. It was clear from the position of the bones, the long bones of the extremities having been arranged parallel to each other at the bottom of the grave, and crania, ribs and short bones heaped upon them, that they had been removed from elsewhere to this, their last resting place. Whether they had been exhumed from some other burial grounds or taken from scaffolds after decomposition had denuded them of their fleshy coverings, as was the custom with some tribes, and deposited here for undisturbed rest, is altogether a matter of speculation. Their condition did not argue great antiquity of interment. It is probable that their possessors belonged to the tribe of Choctaw Indians whom our forefathers found in possession of this part of the country. Certain it is, however, it was the humble grave of humble personages. Those tokens of affliction and evidences of anxious solicitude of the departed, such as vessels to contain food for the long

journey, beads and shells for ornaments, and arrowheads for the chase after entrance was effected into the "happy hunting grounds," were altogether wanting.

The soil of the hill on which the residence of D. C. Love, Esq., is built, as well as that of a part of the lands of Dr. W. B. Childs, adjoining it, is rich with innumerable relics of past ages. It would be difficult to select a square yard of ground that would not, on close investigation, yield up a relic of some description. Over several acres, fragments of pottery and flint lie in abundance on the surface of the ground which for two feet below it they are mingled with the soil. Awl and arrow-points of jasper, hammers of sandstone, point rocks, knives made of shells, beads of clay, and fleshers have been found in this locality.

In July, 1878, after a freshet, parts of a cranium were exposed to view on the side of this hill fronting Magowah Creek. The grave was opened by myself and the size of the skeleton indicated that it was that of a powerful man. With the head to the east the body had been placed on its back and the lower extremities placed over the abdomen. Under the head was the shell of a turtle, and in all parts of the grave shells of the snail and the mussel. On the surface near the grave a relic was found that is valuable because of its symmetry and the exquisite smoothness and polish of its surfaces. From appearances it is half of a tomahawk which had been broken through the eye, the aperture for the adjustment of a handle. The material of which it is made is of a reddish brown color, clayey in appearance, and so soft in consistency that it may be easily cut with a knife. It must, therefore, be considered as having been designed more for ornament than for utility. This little relic is now in the possession of Prof. Joseph Jones, M. D., of New Orleans, La.

At a point ten feet south of this grave there was another whose contents had, in every respect, been similarly arranged. Over it grew a white oak tree measuring one foot in diameter whose large roots had penetrated the grave and slightly misplaced several bones of the skeleton.

Though in timbered land where the tannin of decaying vegetation would exert in some degree a preservative influence, yet, from the condition of the bones, greater antiquity was assigned to these graves than that which contained the three skeletons. But since they furnished no stone implements or pottery, such as were generally buried with the Mound Builder, it would be unsafe to affirm that they were not those of Choctaw Indians. The decayed and fractured condition of the skulls rendered it impracticable to judge them satisfactorily according to the generally accepted rules of craniology.

## MOUNDS AND MODES OF BURIAL.

While the brows of hills, near the border of swamps, were the favorite sites for burial grounds, it appears that the low, alluvial lands were preferable for mounds. I know of only one exception to the rule in this vicinity. Of seven mounds, the subject of my studies, six were within a few paces of unfailing lakes and one within one half of a mile of a creek.

They are all of the round form, in dimensions varying from one and a half to three feet in height and from twenty to fifty yards in circumference at base. Their surface soil, in every instance darker than that of the adjacent grounds, was mingled with shells of the snail and the mussel and fragments of flint and pottery.

Strata were perceptible in the two mounds excavated. The first is situated on the timbered lands of Mr. Charles H. Cocke, at a point one half of a mile north of Magowah Creek. It was of the round form, its height two feet and the circumference of its base about fifty yards. Commencing at its southern side, a trench, three feet in width and two feet in depth, was made through its centre terminating at its northern border. A similar trench was sunk from the eastern to the western border, passing through the centre of the mound. At a point within three feet of its centre, after passing through, are eighteen inches stratum of dark soil, a bed of ashes six inches in thickness was reached, while underlying it and resting on the natural clay, which had been undisturbed, was a two inch stratum of burnt clay. Bones of the squirrel, opossum, deer and bear, fresh-water shells, arranged in concentric lines with reference to the centre of the mounds, fragments of flint and pottery, arrowheads and hammers of sandstone, were found in the stratum resting upon the bed of ashes, while in the ashes there were only such relics as were capable of resisting the action of fire.

The question naturally suggests itself: Did the builders of this mound dispose of the bodies of their dead by the rite of cremation? Since no human bones in a charred condition were found in the ashes the question cannot be satisfactorily answered. Besides, among some tribes, as the Natchicz, fire was employed in their worship of the Great Spirit, and the fact developed from this mound may point to that custom, and make reasonable a conjecture as to who built the mounds of Eastern Mississippi.

One half of a mile east of this and within a few paces of an unfailing lake there is another mound, situated on the timbered lands of Capt. John H. Richards. Its height is one and a half feet, the circumference of its base about twenty yards. An excavation was made about its centre, and six inches below its



surface the skeleton of a man was found. With the head to the east, the body had been placed upon its back, and the lower extremities placed over the abdomen. Under the head was the shell of a turtle, and in all parts of the grave shells of the snail and the mussel. The skeleton rested on a bed of ashes. As its bones showed no marks made by the action of fire, and as it was in a position similar to that of the skeletons exhumed from the burial grounds, it must be considered as having been an intrusive burial.

Excavations were made in the mound at various points, but no other human skeletons were discovered. Throughout the mound, earth was mingled with arrowheads and fragments of pottery, while in the surface soil only bones of the squirrel, opossum, deer and bear, particularly the bones of the lower jaws, were found in great numbers. In my limited explorations the maxillary bones of animals have been more frequently unearthed than any other bones of the skeleton. Within the past month I have explored a mound in this parish (Ascension) and found lying in the same plane, and within an area of one and a half yards square, eighteen sets of jaw bones, supposed to be those of the black bear and the Louisiana tiger. Other parts of the skeleton were not to be found, except two bones of the leg in a much decomposed condition. My observations have taught me to expect a better state of preservation in the inferior maxillary than in any other bone of the human skeleton.

#### OTHER RELICS.

By way of conclusion brief mention may be made of a few prehistoric relics in this county which have not been the subjects of my special study.

Five miles below the city of Columbus, and situated on the right bank of the Tombigby, is a mound whose size indicates that much labor was required for its erection. Measured at its base, its length is two hundred and forty, while its width is one hundred and twenty feet. Its height is fifteen feet. Its sides and ends have the inclination of about one and a half feet hypothenuse upon one foot base. Its long diameter corresponds with a line drawn north and south. The figure of its base, as well as that of its summit, which is level, is that of a parallelogram. Thirty years ago houses stood upon it. They have passed away and now it is overgrown with briars and brambles. Sixty paces from it, in a southwesterly direction, is a small mound of the round form, measuring one foot in height and twenty yards in circumference of base. On the adjacent ground, which at the time of my visit had on it a crop of corn, were found fragments of pottery and one piece of mica. For a

quarter of a mile up the river bank fragments of flint and pottery are plentiful. The same is true of the bank below the mound as far as I proceeded. Limited time would not permit me to give these relics the attention their importance deserved. A few miles below them there is a shoal in the river which renders it fordable in the summer and autumn months. In the neighborhood of this shoal and on the left bank of the river are other mounds which I have had no opportunity of visiting. The abundance of relics strewn along the right bank of the river leading in the direction of the shoal and in the immediate neighborhood of it, justify the conjecture that it was used by aboriginal man as a ford and here, perhaps, was one of his great thoroughfares of travel and trade.

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### The Oriental Department.

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#### A CINERARY URN.

BY REV. SELAH MERRILL, D. D.

Among the relics which I brought from the east is a pottery jar which would hold about three pints. It is globe-shaped, with one handle, a small neck and a flaring mouth. The width of the opening is one and one-half inches, and the height of the jar is eight inches. When found it was full of very fine ashes. I stopped the mouth of the vessel, but a good deal of the dust sifted out and was lost on the way home. A double-handful remains, however, and portions of this have been subjected to a careful examination. The analysis shows that the powder, or ashes, is of an animal and vegetable origin. The vessel is of such a great age that it is decomposing in our atmosphere. I suspect that this jar is a "cinerary urn," and contains the ashes of some person who was cremated in ancient times. The real nature or importance of the object did not occur to me when I found it. I do not think I regard it now with anything like sacred feelings, yet my imagination is strangely busy when I reflect upon what these silent ashes may have been. The jar stands quietly in my cabinet, and I consider myself the owner of the mysterious dust which it contains, and I hope that no ghost will ever appear to dispute my claim. I found the jar in Egypt. In 1874-5 a short piece of railroad was built connecting the one leading from Alexandria to Cairo with that leading to Ramleh, I believe. Near Alexandria a cutting had been made through a hill, which was from forty to sixty feet high. On the top were some ruined military earth-works. At a depth of about thirty

feet from the top of the hill an old grave-yard had been struck and cut through, so that the level of the road was twenty feet below it. The coffins were all of terra-cotta. There were six, and, at one point, as many as eight tiers of coffins. One tier would be cross-ways of the one below it, and they were all laid, apparently, without any regard to the points of the compass. Multitudes of the coffins had been broken, and the debris was abundant. Great numbers projected from the banks, and were still perfect. A number of these I broke open, but found generally in them no remains except a little fine dust. In some cases, however, I found small pottery objects, vases, bottles, etc., placed about where the heads of the dead body would lie. These objects were unmistakably Egyptian in their ornamentation. The coffins themselves, perhaps I ought to state, had no ornamentation so far as I observed. In the coffins I found also the remains of what were doubtless personal ornaments, bracelets, rings, etc., mostly of copper.

When the cutting was first made through the old graveyard a number of valuable objects were found, which went immediately into the collections of private individuals, English, French, or others. Just beyond these beds of coffins, near the foot of the present hill, and about on a level with the road-bed, there were the remains of what had been several furnaces. These, being found so near the coffins, were much more interesting than the coffins themselves. So far as I could judge of their original form, they were six feet deep, three or four feet in diameter, and shaped at the base like the big end of an egg. The form of the top I do not know. They were built of large brick, and a glance revealed the unmistakable fact that they had been subjected to very great heat. By the heat, possibly aided by age, the bricks forming the walls of these furnaces, had been concreted into a solid mass. These furnaces, if they were such, were considerably below the present surface of the hill, and also considerably below the level of the lowest tier of coffins. They may originally have been situated on a plain, or at the foot of a small hill on the top of which would be the cemetery. How the graveyard came to be buried thirty or more feet below the present surface of the ground is something which I do not attempt to explain. The fact, however, is well known to explorers in the East, that one must penetrate far beneath the surface if one would find the genuine remains of remote antiquity. The excavations that have been made at Mycenæ, Ephesus, Troy, in the valley of the Tigris, in Egypt, and in Palestine as well, all prove the truth of the statement just made. It is well known that at Jerusalem, excavations were carried to a depth of sixty, and even to eighty and ninety feet, before the original rock and ground work was struck.

I have endeavored to state all the important facts connected with the locality where the jar or urn which I have described, was found. It was not taken from one of these coffins, nor from one of these furnaces, but from the earth very near the latter. The reader who is at all interested in these details, will be able from them, I trust, to form an intelligent opinion respecting what I call, with some hesitation, of course, a "cinerary urn," "the ashes of an unknown body that was burned," and "the furnaces that were used for the purposes of cremation."

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### THE LATEST CUNEIFORM DISCOVERY.

BY REV. A. H. SAYCE, D. D., F. R. S., QUEEN'S COLLEGE, OXFORD, ENG.

Two very important documents have passed into the possession of the British Museum during the last few months. One of these is a cylinder of clay inscribed with a proclamation of Cyrus, in which he describes his conquest of Babylonia. It casts a new and startling light upon the history of the time. Cyrus describes his occupation of Babylonia as almost bloodless; the people, and more especially the priests not only welcomed him, but had secretly intrigued with him during the reign of Nabonidus, the last king of Babylonia. The cause of this strange conduct is stated to have been the sacrilegious behaviour of Nabonidus; his neglect of the worship of the gods, and contempt of the priests. This, however, is not the only novelty that we learn from the cylinder. Cyrus further appears in it as a devoted worshipper of the Babylonian deities. He not only adopts the style of the native monarchs, but places himself and his son Cambyzes under the protection of the Chaldean gods, above all under that of Bel Merodach, the patron divinity of Babylon. He boasts of his restoration of the Babylonian temples, and of the other ways in which he practically carried out his proposed adherence to the faith of his subjects. In fact, he comes before us in this cylinder as a politic prince, anxious to conciliate those he had conquered; very different indeed from the stern monotheist hitherto pictured by commentators on Isaiah.

This cylinder has been supplemented by a still more important document recently acquired by the Museum. This is a tablet of considerable size, unfortunately half broken, which describes, year by year, the history of the reign of Nabonidus, the conquest of the Medes and Babylonians by Cyrus, and the

first year of the rule of Cyrus over Babylonia. The representations of the cylinder are fully borne out by the official record, which enters into particulars naturally not described upon the cylinder. Owing to the mutilation of the tablet, the annals of the first, second, third, sixth, eleventh and seventeenth years of Nabonidus are in a fragmentary state, those only of his seventh, eighth, ninth and tenth years being complete. The following are the most important facts that can be gathered from the fragments:

In the second year of Nabonidus there was a rising at Hamath, in Syria, and in the next year the king cut down timber on Mount Amanus, and visited Phœnicia, probably in connection with the revolt. The Persians first appear upon the scene in the sixth year of the Babylonian monarch, when we find Cyrus, who is described as king of Ansan, or Southern Elam, engaged in fighting against Istungu, the classical Astyages, king of Ayamtanu or Ekbatana. The army of Astyages, however, revolted against him, and sent him in chains to Cyrus. This would have taken place B. C. 549. Meanwhile Nabonidus, instead of coming to the help of the Medians, remained inactive in the town of Tera, which was probably a suburb of Babylon, contenting himself with stationing his army, under the command of his eldest son, in Accad, or Northern Babylonia, so as to check the advance of Cyrus in that direction. The king's mother called Nitokris by Herodotus, was also in the camp, which was stationed on the Euphrates, near Sippara or Sepharvaim, and here she died on the 5th of Nisan or March, in the 9th year of Nabonidus (B. C. 546), and was mourned for three days by the king's son, the nobles, the army, and the people of Accad, though not, it would seem, by the king himself. About the same time Cyrus completed his conquest of the Medes by crossing the Tigris near Arbela, in order to proceed against the last cities in that part of the former empire of Media, which still held out against him. He then attempted to enter Babylonia from the north, but the Babylonian army was apparently too strong for him, and it was not till the 17th year of Nabonidus (B. C. 538), that the conquest of Babylonia was effected. Cyrus had first tampered with the subjects of the Chaldean king, and, when everything was ready, marched against Nabonidus from the south-east, where the Babylonians who lived on the coasts of the Persian Gulf had already revolted in favor of the invader. Nabonidus now endeavored to propitiate the neglected gods, but to no purpose. A battle was fought in the month Tammuz, or June, at Rubum, in the south of Babylonia, resulting in the defeat of Nabonidus, and the revolt of the people of Accad from him. Sippara was taken by

the Persians, without fighting, on the 14th of Tammuz. Nabonidus fled, but was captured by the Persian General Gobryas, on the 16th of Tammuz, and Babylon was entered without any resistance and without a siege, by Gobryas, almost immediately afterwards. The only resistance experienced was at the end of month, when some "rebels of the land of Gutuim" or Kurdistan shut themselves up in the temple of Belus, at Babylon; but as they had no weapons they could do nothing. It was not until the third of Marchesvan, or October, that Cyrus entered Babylon, apparently during the night, "the roads being dark before him," and appointed Gobryas and other officers to govern the city. On the 11th of the same month Nabonidus died which disposes of the story of his appointment to the government of Caramania. Cyrus allowed the people of Accad to mourn for him six days.

Cyrus now commenced his policy of conciliation. The Babylonian gods were restored to their shrines with every mark of reverence, and on the fourth of Nisan, the first month of the new year (B. C. 537), Cambyses, the son of Cyrus, took part in the religious ceremonies performed in honor of the various deities. As this is the last event recorded, the tablet must have been drawn up soon afterwards, and deposited in the public library, where it could be read by any one who chose. We know from other sources that education was very widely diffused at this time among the people.

It is not necessary to refer to the important bearing these two documents have upon Biblical and profane history, and more especially upon the book of Daniel. One more argument has been added to the case against Xenophon's *Cyropædia*, which competent judges have long pronounced to be a romance, and the siege of Babylon, described by Herodotus, turns out never to have taken place. It is possible, however, that Herodotus has confounded Babylon with Sippara, where the relics of the army of Nabonidus took refuge.

EXCAVATIONS have recently been carried on by Capt. Durand, in the island of Bahrein, in the Persian Gulf, resulting in the discovery of several early tombs and a cuneiform inscription. The island was called Dilvun by the Babylonians and Assyrians, and seems to have been considered a place of special sanctity, since it was termed "the island of the gods" by the Accadians of primitive Chaldaea. Hence, probably, its use as a burial ground. The inscription consists of four lines of Babylonian cuneiform, engraved on a large phallus of black basalt, and reads "The palace of Rimum, the worshipper of the god Khirzak, the governor." By the side of the inscription a conventional representation of the sacred tree has been carved.

## THE ANTIQUITY OF SACRED WRITINGS IN THE VALLEY OF THE EUPHRATES.

BY O. D. MILLER.

The existence of sacred writings in the country of the Euphrates, at a period certainly anterior to Abraham's departure from "Ur of the Chaldees," is reasonably to be inferred from the evidences afforded by the cuneiform inscriptions. From the known intercourse of the Hebrews with the Babylonians, at different periods, dating from the earliest epochs; and from the numerous analogies existing between the sacred traditions inherited alike by the two peoples, and recorded in the sacred writings which each had preserved independently of the other, it is obvious that the origin of these sacred books, as preserved independently by the two peoples, must be assigned to nearly the same antiquity. This is rendered all the more probable from the fact that Abraham, during his earlier sojourn in the country of Ur, on the lower Euphrates, must have been familiar with the Chaldean Sacred Oracles; and now that the use of *papyri* by the Chaldeans from the earliest period has been fully shown, it is by no means impossible that Abraham carried copies of these sacred books with him, on his departure for the country of his future inheritance, and that of his descendants. It will be seen, at least, from the foregoing hints, that the question of the antiquity of sacred writings in the country of the Euphrates, has a direct bearing upon the theories recently put forth by critics, assigning an extremely modern date, comparatively speaking, for the origin of the Books of Moses; and it is proposed in the present article to place before the readers of this journal the leading facts, derived mainly from the inscriptions, tending to establish the high antiquity of the sacred writings, as known to have been preserved by the Babylonians.

In Berosus' account of the deluge, there are three distinct allusions to the existence of sacred books, which, as they are connected with later traditions to be noticed, are reproduced here. It is stated that Cronus appeared to Xisuthrus in a dream, warned him of the coming deluge, and "He bade him bury in Sippara, the City of the Sun, the extant writings, first and last." Again, after Xisuthrus had been translated, his voice was heard by his companions, bidding them to "Return to Babylon, and recover the writings buried at Sippara, and make them known among men." Finally, it is stated that they went their way to Babylon, "and, having reached it, recovered the buried writings

from Sippara, and built many cities and temples."<sup>1</sup> Now, while modern critics have attached no weight whatever to this tradition of the sacred books as transmitted to us by Berosus, it seems to be well established from the inscriptions, that the ancient monarchs of Babylon entertained a firm belief in the existence of such writings, which had been preserved during the deluge, and transmitted to after ages. We refer here to the well-known inscription of Nabonidus, touching the sacred tablets supposed to have been deposited in the foundations of the temple *Ul-bar*, and giving an account of the excavations made at different periods to discover them. We cannot introduce the matter better than in the language of M. F. Lenormant, as follows:

"This history of the tables containing the principles of all knowledge, revealed by the theophanies of Anu (Gr. *Oannes*), which had been buried by Xisuthrus at the time of the deluge, in order that they might be transmitted to the post-diluvian world, had been, as we have shown, the source of the legend quite similar, relating to the columns of Thoth or Seth in the land of Sîriad, to which the Pseudo-Manetho alludes. Josephus says that these pillars existed even in his time; and here we believe to have again a Babylonian tradition attaching itself to a real fact, which is revealed to us by the fragment of the barrel\* (inscribed cylinder) of Nabunahid, discovered at Mugheir the ancient Ur, now preserved in the British Museum.<sup>2</sup> We learn from this, in effect, that when Sagaraktiyas, a king of the first historical dynasty of the Chaldeans, who was certainly contemporaneous with the kings of the ancient empire in Egypt, reconstructed the pyramidal temple of the goddess Ammis, called *Ul-bar*, situated in that part of Sippara known as *Agani*; he made certain mysterious tablets in imitation of those carried by Xisuthrus from Larsan (modern Senkereh), his native city, to Sippara; and buried them under the corner stone (*temin*) of the temple *Ul-bar*. These tables were probably thought to be copies of those that had been buried at the time of the deluge; and thus the king, himself really historical, thought to give to his reconstructed edifice a more august consecration, in realizing a fabulous tradition. In the course of centuries these tables buried by Sagaraktiyas had become themselves famous and legendary; they had come to be regarded, probably, as the originals of those of Larsan, hidden for the first time by Xisuthrus.

1. See Rev. G. Rawlinson's "Five Monarchies," etc., vol. I, pp. 145-146.

2. 1 R. PL., 69.

\*NOTE.—Beside the ordinary brick and slabs employed for the inscriptions, there were the prism and barrel, used for the same purpose. They take their names from their forms. The "prism" has an octagonal or hexagonal form, varying from a foot and a half to three feet in height, made of terra cotta, or burnt clay, its plane surfaces covered with an exceedingly fine writing, often requiring a good magnifying glass to read it. The "barrel" was in all respects similar, except that its diameter was greater in the middle than at the ends, being exactly the form of a barrel, except the flat surfaces. The prisms and barrels were usually deposited in the corners and in the foundations of the temples.



Thus, at an epoch anterior to the 13th century before our era, the king Kuri-galzu, who appertained to the fourth or fifth dynasty of Berossus, made excavations in the mass of the pyramid in search of these tables, but without success. Similar labors were undertaken by the kings of later periods, always for the same purpose, yet with no result. It was only at the period shortly before the reign of the Babylonian power that Nabunahid, after protracted efforts, succeeded finally in discovering the tables buried by Sagaraktiyas."<sup>3</sup>

We give below a translation of the inscription of Nabonidus, so far as relates to these tables, following the versions by Lenormant, Oppert, and Menant. It will be seen to be very fragmentary. Nabonidus proceeds thus:

"The tables of Larsam had been deposited under the corner-stone (*temin*) of the temple Ulbar, at Agani, in ancient times, by Sagaraktiyas, king of Babylon, and Naram-Sin, his son, my predecessors; they had not seen the light before the glorious day of Nabunahid, king of Babylon. Kuri-galzu, king of Babylon, who preceded me, made search for them, but he did not find the corner-stone of the temple Ulbar, and thus he made this inscription: 'I have searched for the corner-stone, and I have not found it.' *Assur-akhi-idin* (Asarkaddan), king of the country of Assyria, king of legions, made search for them" (the tables).

Three lines wanting, when the text begins again as follows:

"Nebuchadnezzar, king of Babylon, son of *Nabu-pal-asar*, my predecessor, with the aid of his army, searched for the corner-stone of the temple Ulbar, and did not find it. And I, Nabunahid, king of Babylon, restorer of *Bit-Saggadhu* and *Bit-Tida*, in my victorious years, adoring Ishtar of Agani, my mistress, I have caused a pit to be excavated. The gods Shamas and Bin directing me, I have searched for the corner-stone of the temple Ulbar, for my own happiness. With the constancy worthy of a king I have directed my army in the search for this corner-stone, where Nebuchadnezzar during three years (180 days ?) had opened a trench for the excavations. They have explored to the right and to the left, before and behind; and I have searched, and *I have not found it*. Then they say: 'We have searched for this corner-stone, and we have not found it. The tempest of waters has inundated everything, and has ruined all.'

There occurs now a long fracture in the text, in which, probably, the monarch gave the details of a renewed search, for when the text becomes again partly legible, we read:

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3. *Fragments Cosmogoniques de Berose*, pp. 291-293.

" . . . the temple of Sin . . . and this temple . . . of the temple Ulbar . . . for the construction of this temple . . . I have found the corner-stone of the temple Ulbar ! and have read the name of Sagaraktiyas at the bottom."<sup>4</sup>

There then follows the memorial inscription of Sagaraktiyas, copied by Nabonidus, after which he says: "I have replaced in the foundations the Barrel of the East, the Barrel of the West, and the foundation stone in front," etc.<sup>5</sup> On account of the fragmentary condition of Nabonidus' inscription, some mistakes have occurred in its rendering heretofore. It is certain, for instance, that Naram-sin was not the son of Saga-raktiyas, but of Sargon, the ancient, king of Agane. On the other hand, it is certain that the name Saga-raktiyas occurs in connection with the memorial cylinder discovered and copied by Nabonidus.<sup>6</sup> But Saga-raktiyas is placed several reigns after *Kuri-galzu*, even, by Mr. Smith; hence it is necessary to conclude that the tables of Larsam were deposited in the foundations of the temple Ulbar by Sargon, the father of Naram-sin.

It will have been noticed in the extract from Mr. Lenormant that he regards the tables of Larsam as pure inventions, on the part of Sagaraktiyas, being led to this conclusion, perhaps, from the fact that Nabonidus does not state, so far as the fragments of his inscription enable us to judge, that he actually found these tables. He merely copies the private inscription of Sagaraktiyas. But Nabonidus does speak of the "Barrel of the East and the Barrel of the West." If the inscription was entire, it is probable we should find some express allusion to the tables of Larsam, if, in fact, the two barrels are not to be identified with them. It seems, moreover, that the tables of Larsam were deposited, not by Sagaraktiyas, but by Sargon, the ancient; and this may account for the fact that they are not mentioned in connection with Sagaraktiyas. There is, then, much uncertainty respecting these tables. But we cannot believe that a deception had been perpetrated, on the part of the ancient monarch. Certainly *Kuri-galzu*, *Asarhaddon*, *Nebuchadnezzar*, and *Nabonidus*, were sufficient judges whether genuine sacred tablets had been deposited in the foundations of the temple Ulbar, in *Sippara*, the "City of the Sacred Books." But, in point of fact, the statement of Nabonidus is positive, that the "Tables of Larsam had been deposited under the corner-stone of the temple Ulbar, at Agani, in ancient times, by Sargon (or Sagaraktiyas), king of Babylon, and Naram-sin, his son," and this statement was made after his search for the corner-stone. Had there been any mistake or deception in the matter, he would have discovered it, and so stated it. At this early epoch, then, it is safe to

4. See Menant's *Babylone et La Chaldée*, pp. 256-257.

5. *Ibid.*, p. 258.

6. See Mr. Smith, in *Trs. Soc. Bib. Arch.*, i, p. 66.

assume that sacred writings existed in the valley of the Euphrates, and, according to all appearances, they had been handed down from a much earlier period, if not even from the antediluvian era.

As regards the date of Sargon's reign, that is, the elder Sargon's, much difference of opinion exists among Assyriologists. The English are accustomed to place him in the 16th century B. C., while the French, including MM. Lenormant, Menant, and others, with much more reason, as we believe, assign him to the period about 2000 years B. C. They assign Sagaraktiyas to about the same epoch. Thus, the existence of sacred writings in Babylonia, 2000 years before our era, seems to be quite well established.

But we have an important confirmation of the position we have assumed, in the late discovery of the "Creation Tablets" and the "Izdhubar Series," or "Deluge Tablets," by the lamented Mr. George Smith. This author believes that the originals of the "Izdhubar Series" were written soon after the death of this hero, whom he identifies with Nimrod, the founder of the Babylonian kingdom.<sup>7</sup> As this account of the deluge formed part of the sacred writings, we must assign the latter to a period much earlier, even, than that of 2000 B. C. At a later period, however, and in his "Chaldean Genesis" Mr. Smith submits a chronological scheme, in which he assigns the origin of the "Deluge Tablets" to the epoch 2000 B. C., as the lowest date, and the "Creation Tablets" to the era between 1850 and 2000 B. C.<sup>8</sup> But these dates appear to have been adopted as the lowest possible, out of consideration for the ordinary Biblical chronology; it is obvious that, in the author's real opinion, these documents appertained to periods some centuries earlier. It should be stated in this connection that the French Assyriologists generally assign dates for the early events and personages some five or six centuries prior to those fixed by the majority of the English school.

It results, now, from these investigations, that as early as the time of Kuri-galzu, 1350 B. C., the Babylonian monarchs were found employing their armies searching for sacred writings, which were supposed to have been deposited in the foundations of a temple which had long before fallen to a mass of ruins; writings, in fact, whose originals were believed to have been inherited from the period before the deluge, and whose copies dated from the epoch not less than 2000 years B. C. Entirely independent of this testimony, we trace the existence of documents at a period still more ancient, containing an account of the deluge, whose analogy with the Mosaic record of the same events is so striking as to enforce the conclusion of the common

7. *Assyrian Discoveries*, pp. 204-207.

8. *Chald. Genesis*, pp. 27, 28.

origin of the two narratives. Then we have the history of the creation, and of the fall of man, exhibiting the same analogies in all the details, between the Mosaic and Babylonian accounts, and dating from about the same epoch. In the two Babylonian documents, the one appertaining to the history of the creation, the other to that of the deluge, the analogies with the Mosaic record of the same events are so numerous and so exact, that it is impossible to trace the two accounts to different *original* sources. Hence, if we admit for one an antiquity of 2000 years before our era, we must assign the same antiquity to the other. It is inconceivable, under such circumstances, that the Mosaic record actually originated only after the lapse of centuries from this date. One of two positions has to be assumed here: either one record was copied from the other, or both had been derived originally and separately from the same ultimate source. In our opinion, for which, if we had the space, very substantial reasons could be given, the Hebrew-speaking Semites had preserved one account, and the Assyro-Babylonians another, both having been derived from one and the same original source. However this may be, that Abraham, before his departure from Ur, on the lower Euphrates, was familiar with documents whose contents were subsequently known under the form they take in the book of Genesis, seems fully established by facts with which every Assyriologist is familiar. That *papyri* were in use at this early period is sufficiently evident from the investigations of both Rev. A. H. Sayce and Dr. Talbot.<sup>9</sup> That the Abrahamites, therefore, possessed copies of the sacred writings before their departure from Ur, is not at all improbable. The book of Genesis is made up of three chief narratives. *First*. The history of the creation and of the fall, accompanied with the antediluvian genealogy. *Second*. The account of the deluge and of the settlements of the posterity of Noah, the construction of the tower, etc. *Third*. The history of Abraham and his descendants, of the sojourn of the Israelites in Egypt, till the time of Moses. The subject matter included under the first and second heads must have been familiar to Abraham, if from no other than from the Babylonian sacred writings, whose existence in his time is now a matter of fact. The matter included under the the third head must have been familiar to Moses, if the family of Abraham had kept the least account of their varied fortunes, and if his immediate posterity had done the same; and it is impossible that they should not have done so. Thus, Moses had at his command, beyond any doubt, all the materials that we find to-day embodied in the book of Genesis, and this book, therefore, undoubtedly dates from the time of Moses.

9. See Trs. Soc. Bib. Arch., i, pp. 343-345, and iii, pp. 430-437.

## RECENT EXPLORATIONS IN GREECE.\*

Archæological researches in classic Greece have taken a new impulse within the past year or two. Two societies are actively at work there; one, the "Greek Archæological Society," and the other the "German Archæological Society of Athens."

Several small caves have been discovered in the neighborhood of Naupia. These resembled in form the so-called treasures at Mykenæ, but were much smaller. Other tombs also have disclosed skeletons, vases, and human images, also resembling those discovered by Dr. Schliemann. The tombs are none of them more than ten feet square or seven high.

The Greek Archæological Society is about to undertake regular excavations in this vicinity, and the opinion is expressed that these excavations are likely to throw light on the early Egyptian settlement of Argolis. The same society has also purchased a large number of houses on the sites of ancient Eleusis and Delphos, in order to commence excavations there. The German Archæological Society has opened an arched rock tomb at Acharnæ. In it were found a large number of articles in gold, silver, bronze, ivory, glass, terra cotta, also similar to those found at Mykenæ. There was discovered neither iron, coins, nor inscriptions—proof that the treasures found in the tombs of Mykenæ belonged to the same age.

Not a single image in clay was found, showing that the rude clay images found at Mykenæ above the treasures, belonged to a later period.

*The Lion of Charoneia.* This noble work of ancient sculpture, far superior to the famous Thorwaldsen lion at Lucerne, has for many years been in fragments, near its pedestal. The Greek Archæological Society is now taking measures to put the fragments together, and to restore the colossal monument to its place.

## CLEOPATRA'S NEEDLES.†

The remarkable obelisks which have been known to the world under the singular cognomen of Cleopatra's needles, and which are now being removed, one to England and the other to the United States, have a much more interesting archæological interest than is generally supposed.

They were taken from the celebrated quarries at Syene, and were like others, constructed in the usual tapering form symbolizing the sun's rays. The material of which they are composed

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\*From the American Journal of Philology, Vol. I, No. 1.

†Brugsch's Egypt, Appendix.

is a rose colored granite. Pliny states that they were transported to the Nile with the aid of flat bottomed boats, floating in canals especially prepared for that purpose. It is supposed that they were afterwards erected to their place by making a groove at their base, in which they might turn as a hinge, and then building a mound of earth, which increased in size as the top of the shaft arose, until the monument stood erect.

They were originally set up by Thothmes III, one of Egypt's greatest rulers, at Heliopolis, or the City of the Sun, as early as 1600 B. C.

They were transported to Alexandria under Tiberias, and set up in front of Cæsar's temple, where they obtained the name which they bear. The name was given to them because of a tradition that they were removed to Alexandria during the reign of Cleopatra.

The obelisk removed to England is 68 ft. 5 inches high, and contains on its two faces hieroglyphs expressive of the titles of Thothmes III; on the other two Ramses II has added his own, illustrating only the pomp and vainglory of these monarchs, but absolutely destitute of historical information. The other obelisk still standing contains many similar inscriptions, and was erected by the same monarch.

The significance to the Bible student which these remarkable monoliths possess, is not so much in their inscriptions or their form as in the fact that they were probably standing in front of the great temple to the Sun when the Israelites were in Egypt. They also remind us of the two pillars Jochin and Boaz, which Solomon erected in front of his temple. Such obelisks were always erected in pairs, and were the most common and prominent symbols of worship at the east.

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#### A BURIED TEMPLE AND PALACE.

The second Assyrian expedition, which was conducted by Mr. Hormuzd Rassam, brought to light some interesting things. Commencing operations on the mounds of Nineveh, Mr. Rassam succeeded in exploring a site which was regarded as forbidden ground. This was the mound of Nebby Yunus, the supposed tomb of the prophet Jonah. In this mound he discovered remains of places erected by Esarhaddon and Sennacherib. His labors on the mounds of Nineveh have resulted in the recovery of a large number of inscriptions, many of extreme interest. Passing southward, he visited Nimroud, where he continued his labors in the Temple of Venus. This building, which he discovered in his former expedition, was now thoroughly examined, and found to be a large, open temple, con-

taining shrines of several deities. There were also found a number of seats arranged in parallel rows, forming a centre aisle from the chief altar. The plan now recovered seems to favor the idea of its having been a species of forum where religious and other councils were held. The explorations in Assyria have discovered many valuable monuments. Mr. Rassam extended his operations into fields untouched since the time of Sir A. H. Layard's expedition, and he was able to carry out a series of explorations on the mounds of ancient Babylon. Here his discoveries have been most brilliant. In a mound hitherto untouched he discovered a palace of Nebuchadnezzar's, with rich, enamelled columns, beams of Indian wood, and every indication of having been a most splendid edifice. His excavations in the mound of the Birs Nimroud, the site of the supposed Tower of Babel, has proved that the destruction of this great edifice was due, not to lightning or hostile attack, but to a volcanic eruption, which had torn and shattered the edifice.

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### CORRESPONDENCE.

#### INDIAN VILLAGE IN KANSAS.

*To the Editor of the American Antiquarian:*

DEAR SIR: In early days I became very much interested in the Indian, through Cooper's *Leatherstocking Tales*.

In 1857 I became a resident in the vicinity of a Pawnee village near the Platte river, in Nebraska; which seems to answer well to the locality where Cooper brings his hero, *Leatherstockings*, to his end.

My early interest induced close observation of the habits, manners, structures, etc., of the "Noble Pawnee." Need I say my admiration was soon largely mixed with other impressions? In mechanics and arts on artistic work I found a singular mixture of savageism and high art.

As a savage, his, or rather her, moccasin was an illustration (as the squaw was the moccasin maker, as well as general laborer). So low was their skill in the structure of the moccasin, as to make them objects of scorn and derision to all the neighboring tribes, and the intense contempt which members of other tribes would throw into the word "Pawnee," when pointing to a Pawnee moccasin must be heard to be realized. Yet these same Pawnee squaws, on their Buffalo robes would outline birds and beasts, squares and triangles of three and four feet lines with a free, unguided hand by rule or measure, with a most astonishing exactness.

This village was in one respect, and one only, an expression of art, and this was in the *selection* of the material. The village was built on the left bank of Pawnee creek, a few rods above its discharge into the Platte. It consisted, at the time, of fifteen wigwams from twenty up to sixty feet in diameter. The main material was cedar poles. The poles were placed on the circumference of the circle bounding the wigwams, with the larger ends on the ground and the tops converging, leaving an opening in the center, for the smoke to escape from a fire in the center of the wigwam below.

For a sixty foot wigwam the poles were placed on the ground twenty-four to thirty inches apart, taking from sixty to seventy-five poles each, of thirty or forty feet in length, and being confined in a small circle at the top. And these poles for each wigwam were (and in that respect every wigwam was the same) of such an exact size that no perceptible difference could be seen. These poles were obtained almost entirely from islands in the Platte river; the annual fires almost entirely destroying them elsewhere, and to obtain sixty or seventy of one exact size must have often caused immense labor and travel.

After the poles were erected, willows and like slender growths were woven in between them, from bottom to top. Then a few inches thickness of prairie grass outside of the willows, and then finished off with a coat of dirt sufficiently thick and compact to hold the grass in place and make the wall tight and warm. An opening or door was left for ingress and egress, over which robes or skins were hung, and many of them had protective inclosures for an entrance to these doors. The inclosure was generally of double walls of matted or woven hazel bush, and filled in, as well as covered over with grass. These passages would extend from ten to twenty feet, often with turns or angles in its direction, in order to break the force of the wind.

An elevated level embankment of about ten inches in height and some thirty inches in width extended around the wigwam inside the wall, where the Indian, wrapped in his robe or blanket, laid him or herself to sleep. Yours truly,

A. L. CHILD, M. D.

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*To the Editor of the American Antiquarian:*

DEAR SIR: I have the pleasure of sending you enclosed a rude drawing of a specimen which has recently come into my possession, and which I saw about two weeks ago at a loan exhibition at Canton. I believe it to be a specimen of prehistoric art in the way of sculpture. I have not seen the former owner; the negotiations for its purchase having been made through another party, but all I know of its history at present is that it



was found by the grandfather of the old man from whom it was purchased, and had remained in the family till now, when the old man, having no children to leave it to, was prevailed upon, for a moderate consideration, to part with it. I have written for the details of its history, and if so fortunate as to get them, will send them to you at once. The material is a nodule of kidney iron ore, pronounced such by good authority. The face is cut in relief; the nose and one cheek have been mutilated slightly by the corroding effect of time or rough handling, and the chin is a little the worse for wear, but beyond this the specimen is in an excellent state of preservation; the face is well defined, as you will see by the profile view. From the forehead to the boundary of the upper part of the face radiate a number of short parallel lines, and the forehead is spanned by two lines that look as if they were intended for wrinkles. From the forehead to the crown extend some ramifying marks evidently intended to represent feathers or some other kind of decoration for the head. It may be that the rude artist was perpetuating, to the best of his ability, the features of his chief. Below the chin is an opening which runs through the base of the specimen which I imagine to be natural, at least it does not have the appearance of having been worked. It is about an inch wide and quarter of an inch high, and four and one-half inches long. This drawing is half size. The specimen weighs two pounds and fourteen ounces, stands four inches high and is thirteen and one-quarter inches in circumference. The face at the widest part (the forehead) is one and three-quarter inches wide, and it (the face) is two and three-quarter inches long.

Yours very respectfully, A. P. L. PEASE.

MASSILLON, March 10th, 1880.

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*To the Editor of the American Antiquarian:*

DEAR SIR: I would notice that an Indian grave was found a few years ago in the bank of the Susquehanna river, in the town of Tioga, Tioga county, N. Y. The bones were those of a very large Indian, and very much decayed. With the bones of the Indian were the bones of two Beavers, showing they had been buried together. The skeletons had been partly thrown or dug out by some farm hands, where I found them some days after, and gathered them and sent them to the Smithsonian Institution. Some days after that I learn a similar case was found thirty miles above in the bank of the Susquehanna, near the city of Binghamton, N. Y.

In this connection I will notice a singular former site of an Indian Lodge, about eight or nine miles south of here, in Windham, Bradford county, Pa., it is under the edge of a shelving rock that projects over seven or eight feet; the lower part of the old red sandstone. I visited this place some years ago.

I should have noticed, this place is near the top of a high hill, about a mile from Wappaseny Creek and ten or eleven from the Susquehanna river. In digging down by the side of the rock at this place I soon found the lower jaw bone of a small child, with part of the teeth in their place, and within a foot or two, a piece of pottery and bone bodkin, also part of a stem of a pipe of stone, I think, which I sent, with other relics, to the Smithsonian Institution. Also, at this place several pieces of river clam shells, and some whole ones; those shells had most probably been brought from the Susquehanna river, as there are none in the creek, and has not been for the last fifty years. This place has been dug over considerable by the people living near, and various implements found from time to time—some fine ones. The site of Indian lodges on the banks of the Susquehanna river are marked by piles of roundish stones, from one to seven or eight pounds in weight, and all show marks of fire, and in quantity from one to one and a half bushels, and a majority of the stones drift from the Oriscany sandstone, with occasionally a stone of porphyry and trap, some showing signs of being heated often. It is certain that the Indians were good mineralogists, knowing which stone the hardest and which the softest and which would stand the most heat.

I would notice I have recently seen Indian chisels only three or four inches long, two inches wide, and only one-half inch at the thick end, made of a greenish stone, in shape different from any I have before seen. Also a small slate-stone, very smooth, three or four inches long, two inches wide and one-eighth inch thick, with three holes through it and three notches on each side.

Nichols, Tioga Co., N. Y.,

ROBERT HOWELL.

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#### A RECENT MOUND.

*To the Editor of the American Antiquarian:*

In September last (1879) I visited a mound used as a place of interment by the Potawattomie Indians. It is located a short distance north of their old village site, on the Kansas or Kaw river, some twenty miles west of Topeka, near Rossville, on the Kansas Pacific railway. The mound, probably a natural one, composed of clean, light colored sand with a covering of soil a foot deep, is situated on the flood plain of the river and some half mile from it. In size it is about six feet high and fifty or

sixty feet in diameter. By continued excavations in the mound for purposes of burial, the protecting covering of soil has been removed from the surface, and every breeze carries away like drifting snow, the sand composing the body of the mound, until a large cavity has been formed by this process, leaving the remains exposed to view. These consist of bones, fragments of cloth, shoes, ornaments of brass, silver, gold plate, such as earrings, thimbles, broaches; also, *spoons, tin pails*, clay pipes, fragments of crockery and glassware, with the remains of wooden coffins, together with large quantities of beads of every color scattered profusely throughout the mound. The deposit of the *tin pails* and spoons would seem to indicate that this tribe of Indians still continue to deposit food with articles of use and ornament with their dead, as did their predecessors, the ancient Mound Builders.

H. B. CASE.

McKay, Ohio, June 29, 1880.

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ANCIENT GRAVES IN KENTUCKY.

*To the Editor of the American Antiquarian:*

DEAR SIR: I received your note of October 15th, 1876, on the subject of antiquities of State of Ohio; in reply can say that in our immediate locality there are only about four elevated earthworks left intact. During my early recollection of this, my native county, there were as many as twenty elevations or mounds, ten to twenty feet high, and from twenty to sixty feet in diameter; all located on the highest points of land, from three to four hundred and fifty feet above the level of the Ohio river; the one farthest from the Ohio river (about five miles) was of late converted into a family burial place. This is the largest of any one of the mounds in my knowledge, and is in perfect condition, except probably three graves in the top. It is covered with a growth of small trees, and is probably sixty feet at the base, and well proportioned. In excavating for the graves, about one year past, I only required the use of a spade, as, after penetrating the soil, I found loose loam, very fine, without clods. I know of one, the base of which is laid with flat limestone; it never was explored beneath the stone, which, from appearances, originally laid on the earth's surface, but it has been plowed down. Eight miles from this city on the Kentucky side of the Ohio river, there is a farm which, from all appearances, must have, at one day, been used as a place of burial; at the present day the vaults are quite perceptible in the face of the bluffs as they give way to the river; all of which send forth relics, pottery, flint, arrow points, bone implements, stone vessels, and all exhibit charcoal and bones of the dead. The vaults have more or less common blue limestone in them;

all evidently have been subjected to great heat. There are also many parts of bones of elk and deer, as well as large, perfect teeth, tusks of bear, large wolf, and many other animals now extinct.

M. A. GAVITT.

Madison, Ind., Nov. 8, 1878.

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THE ORIGIN OF THE INDIAN.

To the Editor of the *American Antiquarian*:

Your postal card and letter were duly received. My time has been so fully occupied that I could scarcely gather up the items and place them in proper form for an article in your very interesting and useful pamphlet.

The question of the origin of the Indians, as you are already aware, has occupied much of my time for many years. At the present moment there appears to be a conflict on the question of the possibility of civilizing the race, and admitting them as citizens. My impression, since my visit to the Territory of Alaska, has been that the tribes on this coast originally came from China. There are several facts I have observed that have led me to this conclusion:

*First.* Recent discoveries in Washington Territory. In digging through a bank for the North Pacific Railroad was found an altar of *Josh* which was inscribed with characters such as are found in his temples in China, causing considerable excitement among the Chinese workmen.

Quantities of beeswax, as late as 1846, were found washed out of the sand that had the appearance of having been buried for ages. This fact could have but little weight in this statement had not the recent action of the waves of the ocean changed the channel of the great Columbia river and undermined and washed away trees of a hundred or more years growth and exposed logs buried in the sands beneath the forests now old and in decay.

*Second.* \*In 1843, a Chinese junk was lost on this coast, three young men were saved, taken to England, educated and sent back to their country; previous to that date Chinese vessels had been wrecked upon this coast.

*Third.* The form, physiognomy, traits of character, and color. These resemblances are as prominent between the Indian and Chinaman as they are between any race of Europeans that come to our country.

*Fourth.* Resemblance in *traits of character*. For seven years past I have had from four to twelve Chinamen in my employ constantly, and during the whole time over forty different ones. You will bear in mind that for the first six years of my residence in Oregon, I worked with Indians, from 1836 to 1842, and had

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\*See page 40, Gray's History of Oregon.

them in my employ, on the Columbia and Iroquis rivers, for over six years more. During the whole time, I say unhesitatingly that I have had less difficulty and less perplexity in dealing and working Indian and Chinamen than I have had in working French, English, Irish or American; they have all been under my supervision and in my employ about in equal proportions, in number and time. The Indian and Chinaman are alike in patient endurance in labor and in disposition, except the Indian's wildness, which may be attributed to the unbounded country which he inhabits, and the confined limits of the Chinaman's country, and the arbitrary laws by which he governed, otherwise I discover no difference in the two races in disposition and in action.

As to their moral or religious disposition. The Chinaman adheres to *Josh*, and has a feast over the cooked or carefully roasted pig; his charm is the *Josh paper*, the fire-cracker, the chickens and sweetmeats, the latter given to the dead as a sacrifice. The Indian has his *Totems*, the eagle, the bears, beaver, wolf and the musk-rat; the horse, canoes, blankets and cooking utensils go to the dead as a sacrifice. The former in a knowledge of arithmetic is superior to the latter, yet the latter count readily into the number of thousands. The Chinaman has a printed language, and, as a nation, is more extensive and uniform in his knowledge of his language. The Indian has not, but has occupied his successive generations in hunting and exploring the vast continent upon which his frail bark was wrecked in the ages past.

Yours respectfully,

W. H. GRAY.

Oliny P. O., Clatsop Co., Jan. 29, 1880,

### A CYCLOPEAN WALL IN A MOUND.

To the Editor of the American Antiquarian:

In working up my correspondence to-day, I find among my files a postal card from you, addressed to A. W. Redings and dated April 18, 1878, asking information in regard to "hewn stone" said to have been found in some pre-historic mounds opened near here on Blackwater, in June of the year previous. At this late date I reply, thinking that you may not have forgotten all about the inquiry.

There were no hewn stone found, the masonry all being of what is known as the *first period* of Cyclopean. I send enclosed a cut showing the general outline of the walls and some of the surroundings. The skeletons were not well preserved and seem to have been interred at periods of time greatly differing. The articles found were also quite widely diffused in their origin. Among the shells found was a large conch, partially decayed.

Fig. 2 represents a dressed stone, somewhat resembling a potter's wheel, but only about three inches in diameter. The material seems to be a hard shale. It is nicely dressed, as shown in the figure, but has been slightly injured on one edge. The spot on top (in centre), resembling a hole is only a depression extending into the stone about one-eighth of an inch. Irregularities show that the stone has been dressed with a flint instrument. The pottery found corresponds in shape and material very closely to that now used by the Utes and other tribes on the plains. The silver band marked in the cut was almost destroyed by rust. The ornamentation around the rim was of the straight line kind, the lines being parallel and inclined slightly.

We hope ere long to give these mounds a more careful examination, and, should we find anything of value, I shall be glad to report.

Very respectfully,

GEO. L. OSBORNE.

Warrensburg, Mo., Jan. 2, 1890.

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## EDITORIAL.

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### THE CHINESE WALL AND THE DARK RACES OF AMERICA.

The line between the civilized and the uncivilized races of the world is one worthy of study. On the Asiatic continent it has been an unchanging point for many centuries. On the American continent it is constantly varying, and has already almost disappeared.

Over two thousand years ago the Chinese wall was erected as a barrier against the wild tribes of the North, but that wall is still the dividing line between the civilization of that ancient empire and the savagery surrounding; but scarcely three hundred years have sufficed to remove the border line between the American culture and the preceding wildness.

We go back in the history of Asia as far as we can trace any record, and we find that society has been almost stationary—civilization being nearly as complete at that date as at the present time. But as we trace the history of America we find changes occurring so rapidly as almost to outstrip the record of them.

The historic and the prehistoric ages have been separated at the East by three thousands of years, but the West not so many hundreds have divided the periods. Between these two dates lie the record of the uncivilized races of the earth, and between the unchanging wall of China and the changing line of American history, lies the territory of many of them at the present time.

The exploring party of Prof. Nordenskjöld found native tribes on the northern coast of Siberia, which have been unknown to the world. Exploring parties on this continent are also bringing to light the existence of peoples which history has never declared. Thus in our day the barrier of distance and the gulf of time are spanned by the researches of the Antiquarian and by the boldness of the great explorers.

We make a note of the progress of history: The uncivilized races have remained as they were when first the wall was erected as a barrier against the Tartars of the North. The civilized races have spread from the distant East, until now, having surrounded the globe, they are about to meet. That wall so marked in its line across the map, is like the shadow on the dial—showing how the progress of the world may come around to the same point again. Nowhere else has there been such a mark upon the map. A dividing line once separated classic Greece from the wild Germanic tribes, and regal Rome from the Goths and vandal hordes—but that line rapidly disappeared, and the ancient civilization soon spread over modern Europe. We once girded the civilization of this land by a similar line, but it has disappeared, and now history only records the barriers which once separated the civilized from the savage, while the progress of the one has already nearly obliterated all traces of the other. If ever the prehistoric races are to be known from the living examples, the work must soon be done, and done mainly upon this continent.

The great problem of Ethnology is before us. The Chinese wall divided a Mongolian race from those of a mingled Malay and Mongolian blood. The separation was, however, sufficient for both to survive. Those races who have dwelt on either side of that wall through all these years, were equally tenacious of life, though one was at least partially civilized, and the other has always remained near the original savage state, yet neither has absorbed or destroyed the other. If the design of the wall was not literally accomplished, yet virtually it has indeed been the dividing line. We must then ask the question whether our civilization will absorb or destroy the races with which it comes in contact? We notice, however, that the lines of geography are drawn where the lines of races once existed. The modern map may not now describe the bounds altogether of the lands where once dwelt the Assyrian, Syrian and Hebrew people, yet the semetic races have so marked their existence on the map that we almost forget the modern in the ancient boundaries. Egypt and Greece and Rome are still known by their ancient limits. Even Germany, France and Spain are the lands where dwelt the separate races in the early historic days; and Great Britain herself

with all her civilization still continues the great ethnic lines which mark the difference in her population—Saxon, Celt and Briton being still survivors on her soil.

The progress of the world has been in the hands of the great Aryan race. They swept on down toward the Indian Ocean and the Malayan Peninsula and overwhelmed the Dravidic race and covered the East with a civilization peculiarly their own. They swept North and West covering the wild and sparsely settled lands with the only historic race that has yet been known, and the civilization of Western Asia and of Europe attest their power. And now it is the great Indo-European race that is sweeping on over this continent and rapidly filling it with the progress of the ages. But here it is to meet that other grand division of the human family. Whoever the Turanians are, it is evident that on this continent the Aryans and the Turanians are meeting in all their branches, and possibly they may meet in all their forces.

The three dark races of the world are here coming in contact with the white, and it is becoming a question what is to be their fate, and what shall we do with them. It is maintained even by some that these belong to an entirely different stock, possibly to another species from the whites, who are the possessors of the soil. Not only are the barriers of national prejudice strong against these races, but it is maintained that the law of nature is unfavorable to their survival—the propagation of the species resulting only in the deterioration and possible ultimate destruction of the lower races, and in the survival of the fittest.

But the rude tribes of Mongolia still survive, the Dravidic races have not yet disappeared, the Negroes which were depicted on the ancient Pyramids are still existing, and the civilization of the East has made but little progress toward either their extermination or their absorption. The Negro, Indian and Mongolian races are already on this continent, and if history proves anything, it proves that they are not likely soon to disappear. The only question is whether we shall erect another Chinese wall which shall here separate the civilized and the uncivilized, and so repeat the history of the past. Miscegenation may not sweep the barrier of race and blood away, but certainly the wall of prejudice, and the narrow, circumscribed view of culture should not erect those barriers which shall be like the Chinese experiment. The progress of history, and the science of ethnology give their testimony to this point.



## ETHNOLOGICAL NOTES.

THE NORTHMEN, AND THE EARLY CONDITION OF  
SOCIETY IN EUROPE.

Of the condition of the Northmen at the time of their first settlement, we can assert nothing. We do not know whether they had already passed out of the hunter stage and become a pastoral people, nor can we mark the date at which this condition was abandoned for the more fixed one which marks the use of the agricultural system. The analogy of all other tribes of which we have any historical evidence, would lead us to suppose that they had at some time passed through these stages. But when we first met with them they had certainly become an agricultural people, and dwelt in settled homes. The origin of society amongst the Northmen, in common with the rest of the Germanic people, is probably to be sought in the village community, an association founded on the real or fictitious tie of the family. According to the system, the district occupied by each community was the common possession of the family or tribe; in what the absolute ownership resided, and was divided into three parts: the village, the farm land, and the common pasture. In the village each of the tribal leaders had his homestead. Of the lands he had a right to a share, but he had to follow a prescribed rotation in his crops. On the pasture lands, he might turn out his cattle, cut his fire-wood, and when they were taken up for hay each marksman would have his hay field. Thus the tribesman was the tenant rather than the owner, and individual proprietorship, as we have it, was unknown. Each village community would have its assembly, in which every free marksman enjoyed a right to sit, and here the petty laws which regulated the self-governing body would be passed. This state of things, however, soon passed away. The improvement of agriculture, and with the rise of separate ownership, inequality of estate, grew up. Thus, by the eighth century, the mark system had at last disappeared.

In the religion or mythology of the Norsemen, their character and peculiar views of life have received a proper embodiment, containing much of the spirit of obedience, and much loyalty to the right. The gods were worshipped partly in the open air in groves or places encompassed by a circle of big stones, partly in wooden temples, among which that in Upsala was most famous. The public worship was in general administered by the head of the family; at the temple, priests were appointed sometimes; also, priestesses. The usual victims were horses, oxen, young

swine, hawks and cocks. Sometimes even *men* were offered, mostly slaves and prisoners of war, for the Norsemen, in their uncultivated state were, in a manner, cannibals. With these barbarous people the number nine was supposed to have something in it of peculiar sanctity.

The Norsemen had some peculiar letters, consisting of sixteen marks or characters called Runes, the origin of which descends to the remotest antiquity. The signification of the word Rune, mystery, serves to allude to the fact that originally only a few knew the use of these marks, and they were mostly applied to charms, witchcraft and enchantments. They were both plain and artificial; with the latter, called Louremes (Lou denoting secret), a great superstition was connected: the priests believing that they were able by aid of them to dull weapons, to stop thunder and hurricanes, and cure diseases. When engraved on nails, wrists, rudders of ships, handles of swords, they were supposed to bring good success and avert danger. The Runes were used as communications in writing, being engraved on their wooden tablets, which were sent away as letters, or being used as the records of kings, genealogical tablets, and the like. Inscriptions on stones were used to preserve the memory of celebrated men, or of noted events. The most remarkable of these Rune stones were the Jellystones in Southern Jutland.—*History of Scandinavia, by Prof. Paul C. Limling.*

### THE MISTLETOE.

The mistletoe is seen in Europe, north from Sweden to the Mediterranean, and in America from the Ohio river to Texas. It is common in the western and southern counties of England, where it grows on various kinds of trees, especially the apple tree. In cider districts it sometimes becomes very destructive to the orchards. It will live as long as there is the least life in the tree, and die after it has killed the trunk that sustained it. It is not supposed to germinate spontaneously on the boughs, but to be planted by birds that feed on its berries in their attempt to wipe their bills from the pulp, thus attaching seeds to the bark.

The species called the sacred mistletoe, is found more rarely growing on oak trees than any other; hence that which grew on the oak was regarded with religious fervor. It was the holy plant to the Druids. On the sixth day after the appearance of the crescent moon, at the beginning of each month, the plants were gathered on a priest's white robe, and distributed among the people, and were preserved by them as charms. In Northern Mythology, the mistletoe represented Baulder, the beautiful, the

loved, and the early lost. For him the holiest Druids sought in the most solemn ceremonies, in the new moon, the mistletoe on the consecrated oak. The discovery of the plant on the oak was hailed with songs, and the sacrifice of a white bull. The plant was gathered from the boughs with a knife of gold, and caught in the white robe, and on no account must it fall to the ground.

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### THE EDDAS.

"After a long silence Professor Müllenhoff has resumed his publications on the subject of German mythology in the *Zeitschrift für deutsches Alterthum*, in an article of sixty pages on 'Sigfrid's Ahnen.' It is the first of a projected series on the *Nibelungen-sage*, and aims at defending the integrity and *Ursprünglichkeit* of the sage against the recent destructive criticism of Symons, in Paul u. Braune's '*Beiträge*' (iii 200-303). Any résumé, however brief, of such an article would far exceed our limits. The author's reputation as an investigator is so high that no utterance of his will fail to receive careful attention. So far as we are competent to pronounce an opinion, we must think that Symons and Müllenhoff are both correct in principle; the former in maintaining that the component parts of the Eddas are of very unequal value, and that the present office of the Edda-scholar is to ascertain with reasonable precision the several degrees of *Ursprünglichkeit*; the latter in claiming for the Sigfrid-sage in particular the highest antiquity and a distinctively German (*i. e.* Continental) origin. Müllenhoff's article discusses with singular acuteness a number of the knottiest points in the *Heldensage*, and is unquestionably the most valuable essay that has appeared for many years.

"Even since the above was written we have received additional evidence of the danger of trusting too much to the Eddas. In a recent number of the *Academy* (Nov. 29) Mr. Sweet gives an extract of Bugge's recent paper on the composition of the Eddas. Prof. Bugge holds that the greater part of them is not of common German origin at all, but borrowed through the English-Celts from Greco-Roman or Jewish-Christian sources. Thus, the Baldermyth, usually regarded as the bright peculiar flower of Scandinavian mythology, is, according to Bugge, a curiously modified version of the Greek Paris-legend. A. Bang, also, maintains that the *Völuspa*, instead of being the most archaic embodiment of German belief, is only an adaptation of the Latin pseudo-Sibylline prophecies. It is evident that we shall probably have to reconstruct our entire system of Germanic mythology."—*The Nation*.

## GRIMM'S LAW.

This law relates to the change of consonants: a certain consonant in Greek becomes another in English, while it is still produced by the same organs of speech, and in high German still another. There are three classes of consonants subject to interchange: labials, dentals, and gutturals. Each one of these contains three consonants, *f*, *b* and *p*, *th*, *d* and *t*, and *h*, *g* and *k*. These consonants pass into one another. That which is merely aspirate in Greek and Latin, becomes soft in English, and hard in the old high German, *f* becoming *b*, and *b*, *p*. The dental series *th* in Greek and Latin becomes *d* in English and *t* in German. In the guttural series *h* in the Latin and Greek becomes *g* in English and *k* in German. Thus we have the Latin *fagus* becoming *buch*, and in high German *puoche*; also, *dico* becomes *teach* in English and *zigi* in high German. *Tego* in English is *thatch*, and in old high German, *dwechan*.

The last number of the *Journal of Philology* has an article on some applications of this law which is quite interesting. It appears that the late Prof. Murray had come almost to discard the law, and to doubt almost the discovery, and the author of this article says, that the uniqueness of it has been made more prominent than there is ground for.

Mr. Douse, in "Grimm's Law; a Study—London, 1876," has as we understand, carried the law of Phonetic changes so far as to bring doubt upon the law itself. The attempt has been made to explain the changes, the mutes in the different Indo-European languages, such as the Classical, the old Teutonic and the High German—and some have imagined that they could find the missing link by which to bridge over the chasm between the sounds. It has been imagined, too, that the circular movement existed, the sonants shifting to surds, the surds to aspirates and the aspirates to sonants again. Mr. Brandt, the author of the article, thinks that the shifting is not circular, but believes that shifting of one consonant to another or the unvoicing of sonants and the changing of the point-stop *d*, voiced to the point-stop voiceless *t*, and other operations of the law may be ascribed to a variety of causes. Doubtless the influence of the earlier inhabitants of Germany may, as Dr. Murray suggests, be thus recognized, and so the discussion of this question comes properly under the province of ethnology, and should be studied in the light of the ethnological changes and characteristics. The phonetic history of language is but an ethnical history in itself.

## THE MOQUIS.

The Moquis are a tribe of semi-civilized Indians in North-eastern Arizona. They form nine families or clans, the Deer, Sand, Water, Bear, Hare, Prairie Wolf, Rattlesnake, Tobacco and Reed Grass. The hereditary chief belongs to the Deer clan.

They are exclusively an agricultural people, raising grain, vegetables, fruits and cotton. They have some donkeys, sheep and goats. They reside in several villages situated on bluffs from 200 to 500 feet high, viz.: Taywah (Tegua), Sechomaive, Jualpi (Gualpi), Meshonganave, Shungopave (Xungopavi), and Oraibi.

Their houses, like those of the Pueblos of New Mexico, are built in terraced stories, and reached by ladders. They are of stone, laid in mud. The rafters are of logs, with poles crossing, covered with rushes and clay; the floors are of earth. They knit, weave and spin, making blankets and women's robes, which they trade with other tribes. They use no intoxicating drink. The men wear blankets, shirts and leggings of dressed skins; the women, a woven tunic, with shawl or blanket. Before marriage the latter wear their hair in two rolls, like horns, at the side of the head, and after marriage in two rolls at the side of the face. They were first visited by Europeans in 1540 (by Coronado), who probably left sheep and other domestic animals among them, which they preserved. The Franciscans, at an early day, established missions among them, but during the rebellion of 1680 the priests were killed or expelled.

In 1723 the Viceroy of Mexico tried in vain to reconquer them. When they first came within the jurisdiction of the United States they were estimated at 8,000; but the ravages of the small-pox in 1855-6, and of famine in 1866-7, has reduced them down to about 1,600.

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ARCHÆOLOGICAL NOTES.

## MUSEUMS.\*

The museum at Boolak, near Cairo, has the finest Egyptian collection in the world. It has been repaired and re-decorated. Mariette Bey, who has been raised to the rank of a Pasha, has been engaged in re-arranging its contents. It is said, however, that about 100 scarabs have been recently stolen from it, and the suspicion is, considering the archæological value of such articles, that some educated men may have committed the theft.

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\*We are indebted to the *American Art Review* for many of the facts concerning Museums.

The Museo Tiberio, recently built in the Botanical Gardens at Rome, is to contain all the objects of art found in and along the banks of the Tiber. The conservatory of the gardens has been turned into a gallery to hold the fine frescoes lately discovered in Farnesoria.

The collection of Egyptian antiquities of M. Allemand, comprising 156 bronzes of animals, 131 ceramic statuettes and a number of other objects, is to be bought by the city of Antwerp at the price of 20,000 francs.

The Museum Torlonio, Rome, is for sale; price, ten millions of dollars. It is extraordinarily rich in antiques.

The Imperial Museum at Constantinople. Rev. A. H. Sayce describes in the *Academy* of September 20, 1879, the antiquities in the museum at Constantinople, consisting of objects from Cyprus, including the large stone figure found by Gen. Cesnola at Amathus; also the gold plates discovered by Dr. Schliemann at Hissarlik, archaic Greek figures, and a charming male figure in bas-relief from Pella, in Macedonia. Of great interest are a series of sculptures from Durfur, which, according to Mr. Sayce, remind one of Mexican art.

A collection of Parisian monuments and antiquities, the greater part of which have been unearthed in the course of excavations in the soil of old Paris, has been opened in the Hotel Carnavalet.

The dispersion of the collection in the India museum has finally been decided upon. The British Museum will receive the series of Buddhist sculptures, thus affording immediate comparison with the remains of Assyrian, Egyptian and classic sculpture. Casts of these sculptures will be made for the South Kensington Museum.

The Peabody Museum of Archæology and Ethnology is now open for visitors, and is remarkable for the fullness of its collections in American relics. Among these are a series of articles from Utah, Arizona, Colorado and New Mexico. Models of the cliff houses and the ruined Pueblos are exhibited. It contains relics from caves, consisting of pottery, bark, cloth, braided shoes and other articles. There are also implements of copper, pipes and other articles of stone from mounds in Ohio and Michigan, and that peculiar pottery from the mounds of Missouri and Illinois, and a very large collection of articles from the graves of the Cumberland Valley. The collection of pottery and relics from Central America and Mexico is also very instructing.

The Peabody Institute at Baltimore has lately received from London thirty-eight casts of antiques, including the Parthenon sculptures. The Parthenon Freize occupies the wall of the North Gallery and extends nearly around it.

Mr. Edward Atkinson has lately received from Bombay a present of nearly two hundred statuettes designed to represent the costumes of the different castes and classes of the people of India. These will be deposited in the Art Museum at Boston.

Among the trophies brought back by Prof. Stephenson, of the Hayden survey, from New Mexico to the Smithsonian Institution, are two idols, or gods, finely chiselled and looking like Egyptian specimens. These were probably brought into the country by the Spaniards. Many specimens of pottery were also exhumed which bear resemblances to the pottery found in the ancient ruins of the Old World. Buried towns and cities are numerous in New Mexico and the relics of a former civilization are apparently inexhaustible.

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#### A HISTORY OF GLASS.\*

The oldest specimen of pure glass bearing anything like a date is a little moulded lion's head, bearing the name of an Egyptian king of the eleventh dynasty, in the Slade collection at the British Museum. That is to say, at a period which may be moderately placed as more than 2,000 B. C., glass was not only made, but made with a skill which shows that the art was nothing new. The invention of glazing pottery with a film or varnish of glass is so old that among the fragments which bear inscriptions of the early Egyptian monarchy are beads possibly of the first dynasty. Of later glass there are numerous examples, such as a bead found at Thebes, which has the name of Queen Hatasoo or Hashep, of the eighteenth dynasty. Of the same period are vases and many fragments. It cannot be doubted that the story preserved by Pliny, which assigns the credit of the invention to the Phœnicians, is so far true that these adventurous merchants brought specimens to other countries from Egypt. Dr. Schleimann found disks of glass in the excavations at Mycenæ, though Homer does not mention it as a substance known to him. That the modern art of the glass-blower was known long before, is certain from representations among the pictures on the walls of a tomb at Beni Hassan, of the twelfth Egyptian dynasty; but a much older picture, which probably represented the same manufacture, is among the half-obliterated

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\**Glass Vessels in the South Kensington Museum.* By Alexander Nesbitt, F. S. A. London: Chapman & Hall. 1878.

scenes in a chamber of the tomb of Thy at Sakhara, and dates from the time of the fifth dynasty, a time so remote that it is not possible, in spite of the assiduous researches of many Egyptologists, to give it a date in years.

Among the most curious examples of persistence in art are the well-known Aggry beads, which occur everywhere in Africa, and in many parts of Asia. Similar beads are still made for the purpose of barter by glass-makers in England and Italy; yet they appear among the oldest remains in many widely-separated places. Mr. Nesbitt considers them Phœnician, and supposes they were made for purposes of barter with uncivilized nations, such as the ancient Britons. Glass beads of extreme hardness have been found in British graves; and, on analysis, were found to be composed and colored in the same manner as those of undoubted Egyptian origin. The usual type is large, not round, but spindle-shaped, and marked with alternate indented bands of red and blue, the colors being separated by a narrow white line. These beads are found in England, on the Gold Coast, in India and Germany, in Italy and Egypt. They are particularly common in the cities along the course of the Rhine. The oldest specimens must be Egyptian; but, in all probability, the pattern was continued in many distinct manufactories at many different periods. Very analogous are little vases of similarly indented patterns; but generally only of blue and white, or blue and yellow. Mr. Nesbitt figures several, labelling them "Ancient Egyptian or Phœnician." One is black and white only. Another is very vivid green, with yellow and blue zigzags. These little vases are common in all the museums, and are occasionally found in early tombs in Egypt, as well as in Cyprus and other Greek islands. As ancient as these little amphoræ and the Aggry beads, are mosaics, where the process of manufacture was the union by heat of a number of threads into a rod, which could be cut at any part so as to show the pattern. This also was an Egyptian invention, and in the Boolak Museum are some exquisite specimens of the time, probably, of the Rameses, or more than 1000 B. C. A little human-headed hawk in the British Museum is of this manufacture. Another in the Slade Collection presents a human bust, and the hair is so fine that what appears to the eye to be a line of the thickness of horsehair, can be magnified so as to show that it is composed of no fewer than nine threads of alternately transparent and opaque glass. This could not, of course, be directly accomplished by any human power, but the glass must have been arranged in larger pieces and the whole "rod" drawn out till it had diminished to the required thickness. The artistic possibilities of this welded glass were infinite, and the Romans first, and afterwards the Venetians, made great use of it.



The only glass relics found in this country are a few beads which are generally supposed to have been brought by early traders for barter among the Indians. Prof. S. S. Haldeman has a number of such in his valuable collection. Rev. F. G. Olmstead has one which he claims was taken from a grave which must have been buried at an earlier date than the time of Columbus. It however has marks similar to those described above as common in Europe at different periods.

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## ORIENTAL NOTES.

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### THE CANON OF PTOLEMY AND THE EGIBI TABLETS.

The readers of this journal will be aware of the fact, that the British Museum contains a collection of contract tablets appertaining to the House of *Egibi*, a celebrated banking firm of ancient Babylon, whose affairs and interests were transmitted from father to son through many generations, and during a period of some 80 years, at least, covering the reigns of several kings. These documents are dated a certain day, month and year of the ruling monarch. Two or three years since, Mr. M. St. C. Boscawen arranged them in chronological order, for the purpose of comparison with the received chronology of the inscriptions, but more especially with the Canon of Ptolemy. The result was that the *Egibi* Tablets were found to agree exactly with this Canon in every particular; thus affording a most important confirmation of it. (*The Academy, London, Jan. 27, 1877, p. 78.*)

But, subsequently, Mr. Theoph. G. Pinches, connected with the Museum, discovered an *Egibi* Tablet dated the *eleventh year* of the reign of Cambyses, the son of Cyrus, the limit of whose reign is fixed by the Canon of Ptolemy at 7-8 years; this period being that also assigned by Herodotus. Mr. Pinches communicated his discovery to the Society of Biblical Archæology, London, in a paper read July 2nd, 1878, in which he remarks:

"This date (the 11th of Cambyses), overthrowing the perfect agreement of Mr. Boscawen's list with the Canon of Ptolemy, . . . the author was at first reluctant to accept on account of the number being as may be seen from the cuneiform text above, so badly written. Soon after the discovery of this tablet, however, another was discovered, bearing the date '11th Tebeh, 8th year of Cambyses,' making him to reign eight years and three months, instead of seven years and five months. . . It is evident, therefore, that the Canon of Ptolemy, in the face of these unimpeachable witnesses, cannot stand." (*See Proceedings, July 2, 1878.*)

Thus, the credibility of a chronological scheme, which had been so long and so confidently relied upon by scholars, seemed all at once destroyed by the silent testimony of a single cuneiform tablet. But we have here a striking example and warning against the adoption of hasty conclusions, unfavorable to long-established results, which have stood the test of criticism for centuries. By the kindness of Dr. E. Schrader, member of the Imperial Academy of Sciences of Berlin, whose sound criticisms have done so much for cuneiform science, we are put in possession of his paper, being an extract from the *Zeitschrift für Ägyptische Sprache und Alterthumskunde*; in which the *Egibi* Tablet in question is fully explained, and in harmony with the Canon of Ptolemy. This author gives the text of the dates of three *Egibi* Tablets, which we reproduce in the Assyrian transcription, followed by a translation:

1st. *Babilu arah Risi-livu yum 25-Kan Sutti 1-Kan Ran-bu-zi-ya sar Babilu ina ju-mu-an-va Ku-ra-as abu-su sar matâti.* "Babylon, the month Risler, 25th day, 1st year of Kambyases, King of Babylon; at that time Cyrus, his Father, King of countries."

2d. *Arah Nisannu yum 29-kan sanat 7-kan Kan-bu-zi-ya sar Babilu sar matâti sa rid-tur-su.* "Month Nison, 29th day, the 7th year of Kambyases, King of Babylon, King of countries, which are subject to him."

3d. *Babilu . . . yum 7-kan Sanat 11-kan (Ra)-am-bu-zi-ya Sar Babilu.* "Babylon, the 7th day, . . . the 11th year of Kambyases, King of Babylon."

We follow here, substantially, Dr. Schrader's versions. In the third date, as will be seen, the month is defaced; but the eleventh year of the reign of this monarch is not to be mistaken. It is the first date, however, which affords the hint to the solution of the difficulty. It appears that during the first years of Cambyases' reign, he was merely a joint and subordinate ruler with his father, Cyrus, who was king of countries, that is, was Emperor, while his son was simply the sub-king of Babylon. The Canon of Ptolemy, then, includes only the period during which Cambyases ruled alone and independently. Accordingly, while at the first date Cyrus was *Sar Matâti*, "King of Countries," and his son King of Babylon, subsequently, and at the second date, Cambyases had become "King of Countries." We seem to have here a completed and satisfactory explanation, harmonizing the *Egibi* Tablets with the Canon of Ptolemy. Dr. Schrader's paper, from which we derive this solution of the difficulty, enters thoroughly into the question, and his results are entirely satisfactory.

O. D. MILLER.

## GREEKS' VIEW OF DEATH.

The sadness with which the Greek looked upon death was gentle and decorous, but it was profound. Both to the Homeric Greeks and the Greeks of the time of Pericles, the life to come was never anything more than a shadowy echo of the life upon earth. It is true that we find in Pindar thoughts of a brighter kind. But the poems of Pindar soon ceased to be popular, and his hope but a single gleam amid the gloom of the time. Æschylus regards the life led in the kingdom of the dead as a feeble and miserable state, in which honor can only be obtained through the remembrance of relations yet living upon the earth. Sophocles held that death was the worst of ills for the happy and only a sorry refuge for the miserable. Euripides hoped that there would be no future state. It is plain from their literature that the Greeks must have looked upon the death of their friends with unmixed sorrow. They made no display of fine inscriptions; the commonest epitaph was a simple *aïpe* or farewell. But they expressed themselves rather in sculptures and reliefs like that which we have here. These are parting scenes, in which are simply expressed the sorrow of the survivors and the simple grief of the sufferer. There is no violence, no covering with sackcloth and ashes; we have only a chastened and moderate expression of profound grief.

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## LINGUISTIC NOTES.

BY ALBERT S. GATSCHET, WASHINGTON, D. C.

Two articles on the MALAYAN RACE and its languages will be found in the February number of the "Journal of the Anthropological Institute of Great Britain and Ireland." In one of these, the Malayan customs and languages are discussed by *Yule*, while in the other, *Keane* makes the attempt to show that the insular Malays are no special race for themselves, but partly Mongoloids, partly Caucasians, or a mixture between both, and that their tongues can be derived immediately from the Cambodja linguistic family of Indo-China. The same number contains an article on the Kabi dialect of Queensland, AUSTRALIA, by Max Müller.

THE position of the CYPRIOTE language, as transmitted to us in the peculiar monumental script called epichoric Cypriote, among the other languages of antiquity has been a matter of doubt, although we possessed a long text in it in the bronze tablet of Idalion, which Prof. Roth has declared to be Semitic (in 1855). But lately an American, Hamilton Lang, the director of a branch of the Ottoman Bank, has discovered a bilingual Phœni-

cian Cypriote tablet in the ruins of a temple of Apollon, which proves conclusively, that the Cypriote language was a *hellenic* dialect with archaic forms. Of all the Greek dialects known to us it has most affinity with that of Arcadia.

THE adjectives of COLOR found to exist among the Siberian people of the Tchuktchis during Nordenskjöld's expedition, 1878-79, have been subjected to an analysis by E. Almquist, and published in the Swedish language in the Abstracts of the Royal Academy of Sciences, at Stockholm, 1879, No. 91, p. 61-69.

EFFORTS are constantly made to derive from one and the same origin the semitic and the indoeuropean languages. All of them have failed and must fail, to the great distress of the pious but unscientific harmonists, who see themselves deluded in their attempt to derive the whole white race and its languages from the biblical Adam. One thing is nevertheless certain, that the primordial forms of Sanscrit agree with those of the most ancient Arabian, which is supposed to represent the Semitic in its oldest shape, *in the names of a few objects of nature* (and also in some verbs, we may add), as shown by the following table presented to the Munich Anthropological Society by Prof. Dr. Fr. Hommel.

	ANCIENT ARABIAN.	INDOEUROPEAN.
steer	thauru	staura
horn	karnu	karna
lion	lib'atu	laiwan
gold	kharudu	gharata
wine	wainu	waina
silver	t'arpu	sirpara

IN another sitting of the same society, Prof. Hommel demonstrated the Caucasian origin of seventeen Nubians then present in the city of Munich. By their anthropological peculiarities and from their language, which is of the Semitic stock, he was brought to the conclusion, that the nation to which they belong, has immigrated, probably, from Arabia across the Red Sea into Nubia, at least five thousand years ago, and possibly much longer.

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#### NEW DISCOVERIES.

The discovery has been made near Neuwied, of what is supposed to be one of the subterranean stores of the ancient Germans mentioned by Tacitus. It contains charcoal, potsherds of rough description, and remains of bones, and on the line wall is the drawing of a running horse, apparently scratched with a hard stone, and evincing a certain amount of skill.

The excavations undertaken by the Prussian government on the site of Pergamus, five or six months ago, have already resulted in some interesting discoveries. Fragments of sculpture have been found in a wall in the lower town, and among the remains now being brought to light on the Acropolis is a large hexagonal base of marble, which seems to have supported a colossal statue of Zeus.

A fisherman has found a very remarkable weapon near the lake dwelling of Locras, in the Lake of Crienz. It is a double battle-ax of pure copper, forty-two centimetres long, and weighing three kilogrammes. Massive and heavy in the middle, it broadens out gradually into two cutting edges, each having a width of twelve centimetres. Several similar weapons have been found in Denmark; but, so far as is known, this is the first of the kind discovered in Switzerland.

A gentleman in Lansingburgh, New York, who deals in mahogany timber in manufacturing, recently came into the possession of a remarkable relic. It is an iron arrow or spear head about four inches long and one and one-half inches wide. It was found imbedded in a mahogany log from Monterey, Mexico. The log was thirty inches in diameter, and from eight to eleven inches of this hard, fine-grained wood had grown over the spear point since it was stuck in the tree. The end of the point was cut off by the saw, and thus led to the discovery. Little idea can be given of the age of this weapon, but it was probably left in the tree by some Spanish soldier at the time of the conquest. It evidently belongs to an age long passed away, as no weapons of the kind are now in use in any civilized region.

A recent number of the *ANTIQUARIAN* contained the record of the discovery of a pipe fashioned in the shape of an elephant. It appears now that two other pipes bearing the same shape have been found. Rev. Mr. Goss, of Davenport, and another German clergyman from Geneseo, Ill., opened ten mounds in Louisa County, Iowa, and in a small one discovered a second elephant pipe. Dr. Farquharson writes concerning it that the stone is the same as the first — a crystalline sandstone — but exceedingly fragile, so much so as to excite wonder at its choice as a material for carving. The trunk of the elephant is straight and projects out at an angle of 45°, so that the opening for the smoke is through the trunk. It is covered with marks which indicate hair.

## NOTES ON ART AND ARCHITECTURE.

Quoted From Recent Books and Reports.

## HOW THE PYRAMIDS WERE BUILT.\*

From the far distance you see the giant forms of the pyramids, as if they were regularly crystalized mountains, which the ever-creating nature has called forth from the rock, to lift themselves up towards the vault of Heaven. And yet, they are but tombs, built by the hands of men, which have been the admiration and astonishment alike of the ancient and modern world. Perfectly adjusted to the cardinal points of the horizon, they differ in breadth and height, as is shown by the measurements of the three oldest, as follows: 1. The Pyramid of Khufa, height, 450.75 ft., breadth, 746 ft. 2. Pyramid of Khafra, height, 447.5 ft., breadth, 690.75 ft. 3. Pyramid of Menkara, height, 203 ft., breadth, 352.78 ft. The construction of these enormous masses has long been an insoluble mystery, but later generations have succeeded in solving the problem. According to their ancient usages and customs, the Egyptians, while they still sojourned in health and spirits, were ever mindful to turn their looks to the region where the departing Ra took leave of life, where the door of the grave opened, where the body, well concealed, at length found rest, to rise again to a new existence, after an appointed time of long, long years; while the soul, though bound to the body, was at liberty to leave the grave and return to it during the daytime, in any form it chose. In such a belief, it was the custom betimes to dig the grave in the form of a deep shaft in the rock, and above this eternal dwelling to raise a superstructure of sacrificial chambers, sometimes only a hall, sometimes several apartments, and to adorn them richly with colored writings and painted sculptures, as was becoming to a house of pleasure and joy. The king began his work from his accession. As soon as he mounted the throne, the sovereign gave orders to a nobleman, the master of all the buildings of his land, to plan the work and cut the stone. The kernel of the future edifice was raised on the limestone soil of the desert, in the form of a small pyramid built in steps, of which the well constructed and finished interior formed the king's eternal dwelling, with his stone sarcophagus lying on the rocky floor. Let us suppose that this first building was finished while the Pharaoh still lived in the bright sunlight. A second covering was added, stone by stone, on the outside of the kernel; a third to this second, and to this even a fourth; and the mass of the giant building grew greater the longer the king enjoyed existence. And then, at last, when it became almost impossible to extend the area of the pyramid further, a casing of hard stone, polished like glass, and fitted accurately into the angles of the steps, covered the vast mass of the sepulchre, presenting a gigantic triangle on each of its four faces. More than seventy such pyramids once rose on the margin of the desert, each telling of a king, of whom it was at once the tomb and monument. Had not the greater number of these sepulchres of the Pharaohs been destroyed almost to the foundation, and had the names of the builders of these which still stand been accurately preserved, it would have been easy for the enquirer to prove and make clear by calculation what was originally, and of necessity, the proportion between the masses of the pyramids and the years of the reigns of their respective builders.

## THE EXCAVATIONS AT OLYMPIA.†

It has already been announced by telegraph that the long sought *head of the Victory of Paionios* has been found, unfortunately without the face. It is, nevertheless, a very valuable discovery, of which the following is an account.

After a necessary interruption during the summer months, the work of excavation was resumed on the 14th of October. We immediately set one hundred laborers to work upon the terrain behind the portico of the Echo, on the east, in order to find the heads still wanting of the east gable, and also that of the Niké (Victory). For in the neighborhood of that portico

\*Extract from Brugsch's *Egypt*, Vol. I, pages 70-72.

†38th Report, published by the "Monitor of the German Empire." Translated from the French for the *Oriental Journal* by Prof. Hendrickson, of Beloit College.

which borders the Albis on the east, we had already, the year before, discovered two heads, belonging either to the east gable or to the metopes of the Temple of Jupiter, or else to the Roman portrait-statue. Thus we were bound to pursue with energy the works in that direction.

The soil appeared at once very favorable, in the first place, because it was filled with ruins of later structures, made from the debris, and whose clay (torchis) walls have already furnished a large number of our marble fragments, and also because the ancient surface here rises toward the embankment of the Stadion. In the most unfavorable places of the Olympic soil, we have been obliged frequently to dig to a depth of 6 or 7 metres in the sand before reaching a layer which could be excavated to any purpose, while here we met the upper parts of these ruins after having removed only a few inches of the surface soil. Fortunate discoveries here at once promised results of increasing value.

Already, on the 20th October, there was recovered from a wall a small statue of Fortuna-Nemesis, with wheel and rudder, which, as may be inferred from a copy of the same figure discovered earlier, has formerly ornamented, with this attachment, the before-mentioned secret door of the Stadion.

On the 29th followed a head of *Titus*, whose neck corresponds exactly to a statue of Cæsar found a year and a half ago; this was nearly complete, the most beautiful statue of this kind that had yet been found, with its cuirass decorated with Nereids, and with all its vivacity of movement.

The 31st October brought us the head of a kneeling child from the east gable, strengthening our hope of finding yet six heads still wanting to this gable, and of which several, like those of Jupiter, Alpheus, Neppodamia, and Steropea, are of very great importance. This child's head resembles a young brother of Kladeas, but of a more noble form, with eyes beautifully set, and full lips.

In proportion, however, as the embankment of the Stadion arose, so ascended also our excavation. On the 3d November, at noon, the pick of a laborer struck, at about the depth of a spade under the surface, a large piece of marble, which was soon recognized as a head. When it had been cautiously freed from the stones which surrounded it (stones of a wall of more recent construction), it was unfortunately discovered that the face was entirely wanting. But at the first moment we almost forgot this loss, in our joy at having finally in our possession the long-sought head of that *Niké* whose discovery had brilliantly inaugurated the excavations at Olympia four years ago. That this is really the head of that Victory of Paionios, both the proportions, the quality of the marble, the headdress, the style, and certain minutiae of the surface work, as well as the place itself of the discovery, does not permit us to doubt. Already over a surface of 100 metres from the pedestal of the *Niké*, we had found fragments of limbs, of drapery, and of wings, belonging to the statue; these were so many indices and guides in the continuation of our researches. Indeed, the neck is so crushed that the head cannot be properly mounted on the trunk, but that it belongs to it, however, the exact harmony of the outlines, and the dimensions of the neck, demonstrate conclusively.

This head differs from the other parts of the statue heretofore found by the preservation of its surface. While the body, in certain places, has been completely roughened by the rain, the rear of the head is relatively well preserved. The probable cause of this is that the head may have been struck off before the body was overturned, the face being severed in the fall, and that afterwards the rear of the head was encased in the wall out of which we recovered it, while the body remained exposed to all the severity of the weather. Moreover it is possible that the layer of color may have helped to preserve the hair and the fillets. But, in any case, what must have contributed to the preservation of this head, is the fact that it was protected on the sides by the erect wings and by an arched drapery which hung between the wings, as is indicated with the greatest probability by certain fragments of the wings and drapery already found.

In this new discovery, what gives us the purest artistic pleasure is the beautiful contour of the head, around which the hair softly waves, held back by a triple fillet, in order that the air, agitated by the movements of the wings, may not dishevel it. It may be said that this arrangement of

the hair is a medium between the elaborate coiffure of the slender young maid embraced by the Centaur in the group of the marriage feast of the Lapithæ, on the west gable, and the graceful ribbons ornamenting those female heads which are found in several museums under the name of Sappho. The head of the Niké has, in common with the former (Lapithean Maid), the severity of motive, and, in common with the latter (the Sapphos), the gracefully waving hair, whose rich tresses flow beneath the bands which clasp them. This demi-reserve (in the ornamentation of the head) indicates its belonging to an epoch near the masters of the severe style; but already in the curling of the hair, is revealed the spirit of the new age, so clearly expressed by the over-bold flight of the Niké, and the exaggerated folds of its drapery.

Though we do not yet possess the most important, that is, the features of its countenance, we need not, however, despair of finding these also. The experiences of the past few years at Olympia teach us that we may calculate with great probability on discovering what is lacking. Dozens of heads have already been recovered here by small fragments. The soil of Olympia has, up to the present, yielded up its works of marble in quantities of which the history of antique excavations perhaps furnishes no parallel. We may, therefore, hope that with perseverance we shall recover not only the face of the Niké and the wanting parts of the Hermes, but also the majority of the metopes and heads of the gables, which are yet lacking. To speak only of these latter groups, when we have already recovered from the soil 41 figures, more or less complete, and 25 heads, we may reasonably hope to find also 15 heads which are yet absent. A succeeding report will show the discoveries that have been made in the other parts of the altis on the west side.

#### THE ANCIENT PRÆNESTE.

A silver bowl was found at Palestrina, in 1876. It bears a Phœnician inscription. A goddess, symbolized by the face and arms of an Egyptian Divinity, and furnished with wings, is represented as saving a huntsman with his chariot and horses from danger.

The inscription reminds us of the Old Testament's expression of "covering" or "hiding under the shadow of God's wings."

Another reminder, also, of Bible customs is found in the duplicate tariffs of the sacrifices offered in the temple of Baal. These were discovered at Marseilles and Carthage. The animals enumerated as fit for sacrifice are - 1. The ox; and - 2. The calf and stag; 3. The ram and goat; 4. The lamb, the kid and fawn. The stag was substituted for the human victims once sacrificed by the Carthaginians, reminding us of the ram which was substituted for Isaac in Abraham's sacrifice. In fact, if the Masoretic punctuation were changed in the Hebrew in the passage in Genesis, xxxii, 13, the reading would be stag, instead of "ram."

**ETRUSCAN VASES.**—The Museum of the Louvre, Paris, has just acquired two vases of large size, of the utmost importance from the scientific point of view. They are two Etruscan vases of the earliest period, with paintings in white on a red ground. On one is seen a chariot attacked by a lion, an imitation of Assyrian art, and a naval engagement between two very singularly shaped vessels.

**THE FRESCO OF FRA ANGELICO.** The recent removal of the magnificent fresco painting of Fra Angelico from what was the chapter house of the convent of St. Dominic, is an event in the history of art. It is well known that the frescoes of this artist are among the earliest works of mediæval art in existence. This, however, in common with other frescoes of great value, has been, owing to the carelessness of Italians, exposed to the danger of destruction. The passion for restoration also threatened to almost obliterate the original. This picture has been washed, as were the frescoes of Michael Angelo on the Sistine chapel. The sky has been injured, and the robe of the virgin has also suffered. When the ancient building was being converted into a villa, the masons cracked the brick walls on which it was painted. Fortunately, Professor Maggariti has recently purchased



the painting, and has succeeded in removing the partition bodily, without injuring the painting. The probability is that this gem of mediæval art will now be preserved, and that it will remain very much as it has appeared under the hand of the great artist.\*

**HOUSES IN INDIA.**—A large square building with an open court in the center, and generally three stories in height. A veranda runs all around each story, opening into the court. Some houses have two parts, one back of the other, both containing courts. The part nearest to the street, in that case, is the one used by the men, the women rarely being permitted to enter it. In the back part the doors and windows of the women's rooms open into the verandas. The women may go into the court, and may visit each others' rooms, but cannot go anywhere else. The houses are built of brick, plastered over and whitewashed. The stores are of brick, roughly put together. The courts are sometimes paved, sometimes of mud, but always destitute of grass. All the rooms of the first story are used for cooking, or else as stables for cows. Their implements are the most primitive. The floors are of mud, and their fire places are like three pillars on which they rest the kettle, and between which they put the wood for burning. They have no chimneys, and the smoke wanders through the room. The rooms where the women live are mere bed-rooms, paved with brick, with one window without glass, but having bars running up and down. The rooms have no carpet nor matting, and no pictures. The furniture is a bed with a piece of matting on it, a wooden box to keep clothes in, and a brass drinking vessel. In this room the mother and the children stay the most of the time.†

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## OUR EXCHANGES.

**REVUE CRITIQUE D'HISTOIRE ET DE LITTÉRATURE.**—Paris, Ernest Leroux, Éditeur.

This valuable weekly review contains among its literary and historical notices many items of great interest to the archæologist as well as to the literary man. The notices of books on Oriental and archæological subjects are especially valuable, as they give very complete information as to the publications on these subjects which appear in France and other European countries.

**MATÉRIAUX POUR L'HISTOIRE PRIMITIVE ET NATURELLE DE L'HOMME:** Dirigée par M. *Émile Cartailhac*. Paris: Ch. Reinwald, Libraire.

The interest taken in the primitive and natural history of the human race must certainly be greater in France than in this country, or no such elaborate and expensively prepared magazine devoted to these specialties, as this is, could be supported. The cuts alone descriptive of the various curious relics of copper, stone, and in some cases of iron, are very expensive. The forty-eight pages of letter press, making 550 pages in the volume, must have involved a large amount of time and labor.

It is one of the most complete magazines on archæology in the world. We take pleasure in recommending it to our readers.

**THE JOURNAL OF PHILOLOGY:** Edited by *W. Aldis Wright, M. A., Ingram Bywater, M. A., and Henry Jackson, M. A.* London: McMillan & Co., 1879. Vol. VIII.

The number before us contains about 160 pages of solid reading mainly on classical philology. One article is on "Tone and other Characteristics of Chinese," and another on "The Genuineness of the Sophist of Plato and some of its Philosophical Bearings." The latter article is especially interesting, maintaining that Plato designed his work as a critique of the doctrine of three existing schools of philosophy in Greece, namely, the Eleatic, the Megaric and the Cynic, and showing the various issues of thought which prevailed in Plato's time.

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†Harriett G. Brittain, Congregationalist, April 19.

\*National Repository, February, 1880.

It is refreshing to find in a strictly philological work these oases of thought. The general reader is certainly much more interested in the philosophy of scholars than in the logomachy of the professional linguists, and it is reasonable to suppose that the linguists themselves are ultimately to reach the thought of the writers and that the technicalities of their pursuits are only a means to this end. The picture of ancient times portrayed by words and relics is growing more and more complete, so that we welcome the philological journals as most efficient collaborators in the archaeological field, or rather are glad to be welcomed ourselves to that field. So manly and strong a journal is certainly to us a welcome *exchange*.

THE AMERICAN JOURNAL OF PHILOLOGY, VOL. I, No. 2: Edited by Basil L. Gildersleeve. Baltimore, May, 1890.

Journals of philology are common in Europe, but like other specialties have not heretofore received much support in this country. This magazine starts well. Each number, about 120 pages of finely printed matter, is fully up to the standard of European journals both in contributions and in editorial management.

This number contains, among other articles on specific points in philology, one on the more general subject of "Grimm's Law" and its applications. Among the book reviews we notice one of Garrick Mallory's "Introduction to the Study of Sign Language," by C. H. Toy. The number also contains thirty pages devoted to "Reports," which means a digest of the reports of philological societies, museums and other societies.

Prof. Gildersleeve, the editor, is spending several months in Europe and the editorial work is now done by Prof. Chas. D. Morris, of the same University.

THE AMERICAN ART REVIEW: A Journal Devoted to the Practice, Theory, History and Archaeology of Art. Boston, New York, Chicago: Estes & Lauriat. Edited by S. R. Koehler, Wm. C. Prime, LL. D., and Chas. C. Perkins.

This is a charming work and seems to have a distinctive field. It enters into the work which is done in Europe by the *Portifolio*, the *Gazette des Beaux Arts* and the *Zeitschrift fur Bildende Kunst*. The design seems to be to cultivate the art taste and direct the enthusiasm for art in this country so that cultivated people may keep pace with the times and intelligently employ their time and money in these gratifying pursuits.

The magazine is devoted to no school, but makes a specialty of the history and archaeology of art on this continent, and at the same time gives a great amount and variety of information concerning ancient mediæval and modern art in Europe and the Eastern continents. Especial attention seems to be given to etching, and each number contains two or more full page portraits or landscape pictures by prominent American etchers. Modern wood engraving, which has reached such wonderful completion, also receives marked attention. Such wood and steel-plate engravings as have been employed have shown a judicious selection and excellent taste. One of the most remarkable things about the book is that the engravings are generally made to suit the letter press rather than the letter press to suit the engravings. The only way that any education in art can ever be properly given is, in our opinion, to allow the hand to be governed by the head rather than the thought to be governed by the art. The eye may educate the taste, but it does not develop ideas. Hence the value of good material on the history, the archaeology, and the theory and practice of art in all its departments. We are glad to see this new venture which seems to indicate so much confidence in the culture and correct taste of the American people, and we welcome the magazine to our exchange list with a great deal of pleasure.

PROCEEDINGS OF THE DAVENPORT ACADEMY OF NATURAL SCIENCES: Vol. II, Part II. Davenport, Iowa: J. Duncan Putnam, 1890.

This report is a marvel of science. Such progress in a little academy of science in an inland western town is indeed wonderful. Without means, except such as the enthusiasm of the members could collect and without prestige of great names or the reputation of any of its members, the society has kept diligently at work until now its report fills a volume,

which for size, and for specific information, equals any report published on the continent. What is remarkable about this report is that it is filled largely with archaeological subjects. The field which the academy occupies is to be sure one very favourable for such researches, it being the centre of the great territory of the mound builders, and abundant opportunity is at hand for exploration.

That the work of excavating and searching for the contents of these mounds has been diligently pursued is evident from this report, as there are no less than fifteen descriptions of mounds and mound explorations in this one volume. The only fault that could be found with the work is the absence of any general and thorough topographical survey. This neglect we consider a very serious fault, as there is far more to be learned as to the tribal peculiarities, religious views and general habits of the mound builders from an intelligent study of the works in their topographical surroundings, than from the collection of all their relics combined. But the academy has done a grand good work, both in collecting and exploring, and we congratulate the members on finding a publisher who is willing to devote so much time and money to the interests of so progressive and hopeful an institution. We personally know that Mr. J. D. Putnam, the former corresponding secretary, has expended much more money in this work than he will receive back, but such are the men, and women too, who lay the foundations for the future.

THE JOURNAL OF THE CINCINNATI SOCIETY OF NATURAL HISTORY: April, 1880. Cincinnati: James Barclay, Printer.

The Cincinnati Society of Natural History has been in active operation for several years. Occupying a field peculiarly favorable for geological investigation, the work has been mainly in the direction of geology, together with conchology and botany. Within two or three years the activities of some of the members have been directed to the investigation of prehistoric tokens, and this report abounds with results in that department, twenty-eight pages out of sixty-eight being devoted to the account of explorations near Madisonville, Ohio. This report has already been given to the public in a condensed form in Prof. J. T. Short's volume on the North Americans of antiquity, but as here given is much more complete. It is attended with twenty-one wood cuts and ten full page lithographs picturing the various pipes, specimens of pottery, skeletons and skulls which were discovered in the mounds and ancient burying places of this vicinity.

The region about Cincinnati is prolific in Mound Builders' relics. No city in the Union furnishes such an abundance of relics, and some very large private cabinets have been collected beside the very considerable collections which are exhibited in the society's rooms. The intelligent gentlemen who are residents of this vicinity seem to be alive to the importance of a proper study of the subject and hence the scientific circle at Madisonville from whence this report comes. We congratulate these gentlemen on their success.

TWELFTH AND THIRTEENTH ANNUAL REPORTS OF THE TRUSTEES OF THE PEABODY MUSEUM, ETC.: Vol. II, Nos. 3 and 4. Cambridge, 1880.

This volume includes, beside the report of the curator and the list of additions to the museum and library during the year 1878-1879, several articles contributed by gentlemen who are scattered through various parts of the United States. One of these is by Lucien Carr upon measurements of crania from California; another on flint chips, by C. O. Abbott, gives an account of certain open air workshops where the ancient inhabitants preceding the Indians manufactured their arrow-heads; a third article by Paul Schumacher on the method of manufacturing pottery among the Indians of Southern California. Elmer R. Reynolds gives an account of aboriginal soapstone quarries in the District of Columbia, and Hon. Lewis H. Morgan describes an ancient stone Pueblo on the Animas River, in New Mexico. An article follows which occupies about one hundred and fifty pages on the social organization and mode of government of the ancient Mexicans, by Ad. F. Bandelier. The latter is one of a series of articles on ancient Mexico and seems more suitable for a Smithsonian contribution than for a museum report, but is very valuable to American scholars.

The report fills a ponderous volume of 775 pages and is a valuable addition to the literature of archæology, especially as it gives the results of latest investigations and study on the American continent.

BULLETTINO DELLA COMMISSIONE ARCHEOLOGICA COMUNALE DI ROMA: Anno VIII, Serie Seconda. Roma, 1880.

This report contains first "Corpus Inscripteonium Latinarum," seventy-three pages, by Sig. Rodolfo Lauriani, and second, "Anfora Aramaica del Castro Pretorio," by Prof. Enrie Fabiano, a photograph page and two folded plates illustrating the latter article.

*The Popular Science Monthly* for March, April, May and June.

The following articles are worthy of attention: The Dolmens in Japan, by Prof. Edw'd S. Morse. Prehistoric Ruins in Southern Colorado, by Henry Gannett. The Textile Plants of the World. Size of Brain and Size of Body. Climate and Complexion. The Crossing of Human Races, by A. De Quatrefages. Recent Geographical Explorations. Views of Primitive Marriage. The last two are especially valuable.

*The Naturalist*. This magazine has always valuable notes on anthropology and archæology from that scholarly gentleman, Prof. O. T. Mason. The July number has also an article on the use of fertilizers by the American Indians, which has considerable interest to our readers. Several articles on the modern doctrine of evolution have appeared in late numbers, from the pens of Prof. Cope, F. S. Lippincott, and others.

*Kansas City Review*. The miscellaneous but scholarly character of this magazine continues. It is delightful to know that amid the activities of a new country so many find time to pursue special studies, and to wield scholarly pens. Such men as Judge West, A. H. Thompson, G. C. Brodhead, A. L. Child, and others, are valuable anywhere, and especially so, so near our western frontiers.

There is no doubt that the existence of this journal gives encouragement to the pursuits to which these gentlemen are devoted, and that the societies of that region are better known by the means, and yet we are grateful for their faithful adherence to our own journal through the two years of its existence. The friendly cooperation of the *Review* has been a source of encouragement also.

The *North American Review* for July has an article on the Exodus of Israel, by Pres't S. C. Bartlett. The position of the writer may be understood by the following extracts. Modern scholarship is learning more and more the lesson of respect for the narrative of the Pentateuch. The contrast between the flippancy of Von Bohlen and his contemporaries, and the considerate deference of Lepsius, Brugsch, Birch and Poole, is instructive. One result already reached has been to assert the substantial contemporaneousness of the narrative of the exodus with the transaction. The substantial fact of the expedition is no more to be questioned than the Norman conquest. We not only find this transaction imbedded in the tradition of Egypt, but we can now approximately connect it with its monumental history, as well as with the geography of Egypt. The period now commonly assigned to the Exodus is the reign of Menephta, son of Rameses II. The general locality of Israel is well settled. Herr Brugsch's departure from his own former view, locating Rameses at San, is not necessitated by any discovery he has made. Just south of Suez, are found all the requisites of the scripture narrative.

The *National Repository* contains several articles on Raphael, illustrated with wood-cuts illustrating his masterpieces. The June number has an illustrated article on the Lenox Library, and one on Oriental Weddings. The notes on art and archæology in this journal are generally discriminating and instructive.

*Potter's Monthly* for April has an illustrated article on the Land of the Montezumas. For May, one on the Land of the Iliad, by F. Myron Colby, with cuts of Ancient Sardis Plain of the Troad, the Greek and Trojans, Alexander the Great, Helen and Paris, site of ancient Troy, Philadelphia near the Troad, Modern Pergamus, &c.; and for July a valuable contribution by George Bancroft Griffith, on Cathedrals, illustrated by cuts of Trajan's column, the Pantheon at Rome, interior of St. John's, Vatican at Rome, Leaning Tower at Pisa, Antwerp Cathedral, and old St. Paul's, London.

*The Archaeological Institute of America First Annual Report.* This Society was formed for the purpose of promoting Archaeological investigation, both in historic and prehistoric fields. Life membership, \$100; Annual, \$10.

The *Magazine of American History* for April, contains an article on the Pawnee Indians, their History and Ethnology, by John H. Dunbar; also the No. for March contains one on the Mound Builders, by R. S. Robertson, an article which was read before the Congress de Americanistes, at its second session, in Luxembourg.

*Proceedings of the Boston Society of Natural History.* Vol. XX, Part II, contains Traces of the Mediterranean Nations in the Northern Ocean, by Dr. Kneeland; *e. g.*, stockings, containing Spanish patterns; flaggee silver work, such as was made in Genoa; the Phrygian caps of the Icelandic students, similar to the head gear found in Greece.

*The Transactions of the Academy of Science of St. Louis.* Vol. IV, No. I, contains a paper on the Geological and Geographical Distribution of the Human Race, by Nathaniel Hernes; a vocabulary of the Zayne language of Chopas, Mexico, by Ada C. G. Collins; and an article on Egyptian theology, by Prof. G. Seyffurth, D. D., illustrated with Egyptian pictographs. This author opposes the "champollionist" method of deciphering Egyptian, and proposes one of his own.

At a meeting of the *Boston Society of Natural History* in October, 1879, Prof. F. W. Putnam reported the discovery of chambered vaults in mounds in Missouri, resembling the Dolmens of Europe, with passage ways several feet in length and two in width, leading from the southern side, and opening on the edge of the mound. The walls were similar to those described by Prof. Osborne in this No. of the ANTIQUARIAN. Such structures are very rare on this continent.

The *New Englander* for May has an article on work and leisure, by Ernest Curtius, being a translation of an oration delivered on the birthday of the Emperor William, March 22, 1875—an article illustrated by many allusions to the customs of various nations, and abounding with many suggestive thoughts.

The *Canadian Naturalist*, Vol. IX, No. 4, has a second article on the origin of some American Indian tribes, by John Campbell, M. A. The position of Mr. Campbell is that the Algonquins and the Iroquois were derived from Asiatic races, and that the Malay and Mongolian forms of speech, roots, suffixes, affixes, etc., can still be recognized in the vocabularies of the different tribes.

The *Penn Monthly* for June reviews the controversy which has been going on over Mr. Morgan's classificatory system of relationships, contained in the Smithsonian Contributions for Knowledge, Vol. XV. The author of the article, Wm. F. Allen, defends this system from the attacks made by Mr. McLennan, the English ethnologist, which appeared in that author's work, entitled "Studies in Ancient History." Mr. Morgan takes as his starting point the gens, an organism which he finds universal among mankind, and cites the cases of nations as remote as the North American Indians and the Aztecs, and the Romans of early classic history. Mr. McLennan ignores the gens, but recognizes one fact held by Mr. Morgan, and that is the prevalence of exogamy. The custom of marrying outside of one's own tribe, Mr. Morgan maintains, did not exist, but that of exogamy, as related to the gens, he believes is of universal observance. Mr. Morgan's theory is certainly borne out by the facts, as ascertained among the native tribes of America, though it is possible the two authors may differ more in their definition of what constitutes the tribal relationship than in the existence of this custom. It is hopeful for the progress of Mr. Morgan's theory that all the prehistoric races, especially of the Mound Builders, as well as of the living native tribes, go to prove the existence of an extensive clan or gens system.

*Western Reserve Historical Society.* Col. C. Whittlesey, Pres't. Tract No. 50, Ohio Indians, by Judge Hugh Welch. No. 51, The War of 1812: Gen. Wadsworth's Division of Ohio Militia, by Col. C. Whittlesey.

*New Hampshire Historical Society.* Sam'l C. Eastman, Librarian. On the origin and use of the name Kearsage, as applied to two mountain peaks in N. H. By John M. Shirley and Hon. C. V. Fox.

*New Jersey Historical Society.* Rob't S. Swords, Librarian. 1. The Bones of Columbus, by Col. R. S. Swords, at the annual meeting at Trenton, N. J., Jan. 23, 1879. 2. Massacre at Tappan, in September, 1773, by Gen. Wm. Stryker. 3. A Memoir of Prof. Joseph Henry, LL. D., by Prof. James C. Moffat. At the May meeting in 1879: 1. Character and Employments of the Early Settlers on the Sea Coast of New Jersey, by Rev. Allen Brown. 2. The Newark Mountains in the Last Century, by Stephen Wicks, M. D.

*The Transactions of the Connecticut Academy of Arts and Science.* Vol. V. Part II.

*Michigan Pioneer Collections,* Vols. I and II, Lansing, 1876, 1877-8.

### BOOK REVIEWS.

*FOOT-PRINTS OF VANISHED RACES.* By A. J. Conant. St. Louis, Mo. Chauncy R. Barnes.

That Missouri, with its genial climate, diversified surface, and numerous streams, was a favorite home of the Mound Builders, is evidenced by the innumerable mounds and other works of engineering skill met with in such profusion in different parts of the State. From time to time, vague reports of mysterious stone ruins, or peculiar earth structures having been found by some curious or chance explorer, have appeared in different journals, been copied by the press generally, and raised a longing among archæologists for a more complete knowledge of Missouri's antiquities. And, too, the great quantities of pottery, almost constituting a distinct type, taken from these mounds in late years, has only helped to increase this curiosity.

To meet this want as far as possible, *Foot-Prints of Vanished Races*, constituting at first a department in a State history, was embodied in book form by itself, and given to the public by the author.

We took it up eagerly and looked it over with that keen enthusiasm an antiquarian always feels when coming upon entirely new ground. We had a right to expect in a book put forth under such circumstances, something of decided value to the antiquarian, if not to the general public, but, while there are some new facts brought out, it seems to be so overloaded with a too credulous acceptance of untrustworthy authors and traditions, as to be misleading to the ordinary reader, and disappointing to the archæologist.

The author, where describing his own explorations, is always interesting and careful in his statements. His description of the cave-dwellings of the Ozark mountains appeals to our love of the mysterious, and opens up a possible new field in American archæology. As deeply interesting also are his accounts of the ruins in the "sunken country," having New Madrid for their base, and the stone structures and chambered tumuli in other parts of the State.

On page 39, Mr. Conant assumes cremation to have been practiced before burial, and builds a theory upon it, without attempting in the first place to prove a position not always admitted. On page 63 he adopts the tradition, on very slender grounds indeed, that the mysterious *inside ditch* to so many of the larger earthworks, was for a sort of fish preserve. On page 64, speaking of the Mound Builders, he says, "some of whom are known to have migrated to the southwest." Where does he get his "known" knowledge? That is just what archæologists have been looking for. On page 66 he gives to certain hypothetical mounds, and without even a show of reason, the character of "garden mounds"!

But the scientific value of the work is impaired by too great credulity, and by various assumptions which are not borne out by facts. The prominence given to the book written by Mr. Wm. Pidgeon is an illustration of this. Mr. Pidgeon may have given some facts, but his book is worthless as an archæological guide.

The work in question is, in some respects, quite a valuable addition to our archæological knowledge, yet its scientific value is marred by the loose statements so frequently made. We, in this country, have had in the past too many wild speculations to advocate. It has detracted from the real value of our antiquarian remains and studies. Until very lately we have not been recognized as having any scientific standing by European savants. Let us gather the facts first; they are disappearing rapidly. We will have plenty of time afterwards to theorize.

MENDOTA, ILL.

J. D. MOODY.

THE TRUE STORY OF THE EXODUS OF ISRAEL, AND THE HISTORY OF MONUMENTAL EGYPT, compiled from the work of Dr. Henry Brugsch Bey, by *Francis H. Underwood*. Boston; Lee & Shepard, 1880.

BRUGSCH'S "Egypt under the Pharaohs" is a scholarly work, based on the decipherment of the monuments. It contains the translations of many remarkable inscriptions, and is accompanied with maps and plates, but it is somewhat expensive. This abridgment gives the gist of the two volumes, in the condensed form of a single 12mo. volume of 236 pages. The abridgment is, for the general reader, as good as the original. It contains just those passages which a careful reader would be likely to mark, and saves the trouble of reading through much learned but cumbersome matter.

The style of the author in the original is very uneven, sometimes crowded with specific dates, hard names and dry facts, then giving way to a flight of rhetoric. In this respect the abridgment is somewhat an improvement; the peculiarities of the original are somewhat toned down by the translation.

The volume however contains much of the technical language and information of a professional Egyptologist, and for this reason is not quite as readable as a compilation of the same facts would be, yet it is probable that the volume would be prized more highly because it is an abridgment and not a compilation.

Mr. Brugsch's book has very great value to Bible students, especially as there is that constant outcropping of the underlying strata of Bible facts amid the accumulations of monumental history, which is absolutely surprising. There are those who do not like this confirmation of Scripture from the testimony of the monuments. It would not be strange, too, if Brugsch should be attacked on both sides—by Bible students because he differs from the accepted views as to the place where the Israelites dwelt, and the route which they took, and by skeptics, because he has presumed to recognize the Bible at all, in his investigations.

The Israelites were certainly in Egypt, whatever route they took in their Exodus from Egypt, and it is refreshing to know that Egyptologists recognize the fact, even if they differ as to some points, especially in their way of explaining the miracle of the crossing the Red Sea.

It is probable that this volume will be extensively read, and we congratulate the publishers on the success which doubtless awaits them in their effort to bring these facts of ancient history into an available form for the reading public.

PRE-ADAMITES, OR, A DEMONSTRATION OF MAN'S EXISTENCE BEFORE ADAM. \* \* By *Alexander Winchell, LL. D.* Chicago: S. C. Griggs & Co., 1880.

To reconcile the Scripture account of the history of man, and the recent discoveries of science concerning prehistoric man, different authors have given several theories.

One, advanced by McCausland, is that the Bible represents only the particular race who were the worshippers of the one God, and to whom revelation was given. Another, by Dr. Tayler Lewis, is that a cataclysm occurred before Adam's creation, by which all mankind was destroyed, and that a new race was created. The theory advanced by Prof. Winchell is that the race was developed from former existing species, but that the white race is the one mentioned by the Bible, while other races existed, which were pre-Adamic.

Prof. Winchell's theory is carried out much more completely than either of the preceding, and is sustained by a remarkable array of facts, in the geography, history, chronology and ethnology of the ancient races, drawn from the Bible, and from books of ancient history. One argument is that many existing races show in their craniology, physiology and psychology, that they differ from the white race and were pre-Adamic, or were in existence before the flood, and survived that event, which was only local in its effects.

The white race included the Hamitic, including also the Egyptian and Nubian; the Semitic, including Chaldean and Hebrew; and the Japhetic, including Medean, Hellenic, Scythian, Hindoo. The genealogy of the race

was: *First*, from the pre-Australians, a black race. *Second*, Hottentots. *Third*, Papuans. *Fourth*, Malayoids to Dravidians, then Adamites, or Mediterraneans, and so to the Hamites, Semites and Japhites. The author says: "I have assumed the possibility that the *brown* races are Adamic, though I have indicated a leaning toward the opposite view."

These attempts to reconcile science and revelation are hopeful, even if they are mainly tentative rather than conclusive, for, like the suppositions of geologists in regard to the creative days, they show the conviction that there is harmony rather than conflict between the two records.

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### NEW BOOKS.

*Worsaae, J. J. A., la conservation des antiquités et des monuments nationaux en Danemark. Copenhagen, 1878, 8vo., 17 pages.*

This report forms a portion of the "Transactions of the Royal Society of Northern Archæologists," and contains a historic sketch of all that has been done to preserve the national antiquities and monuments of the pre-historic and historic epochs, in execution of the royal decree of 1858. Sums exceeding two millions of francs have already been expended on the restoration of ancient cathedrals and other monumental churches, and a number of museums and archæologic cabinets were created in several portions of the kingdom. The well-known Dr. Worsaae, the author of the report, has been appointed director of the museum called, "Chronological Collection of the Kings of Denmark," in the Castle of Rosenborg, in the city of Copenhagen. A. S. G.

*Charles Hawley, D. D. Early Chapters of Cayuga History: Jesuit Mission in Goi-o-guen, 1656-1694. Auburn, N. Y.: Knapp & Peck, 1879. 8vo., 106 pages and map.*

The narrative contained in this book is resting almost exclusively upon the diaries of the Jesuit missionaries sent to France annually to be published under the title, "Relations des Pères Jésuites." From these most important witnesses our author has reconstructed a most lively picture of the savage Iroquois Indians, their league, their inhuman and perpetual wars; of the devotion of the missionaries sent from France to christianize the haughty men of the forest, the martyrdoms, deadly perils and hair-breadth escapes of the fathers, and the results gained by their teachings, results which were exceedingly precarious when compared with the enormous labor bestowed on their acquisition. Books like these are invaluable for those who seek to acquire a thorough ethnologic knowledge of the Iroquois race, the cognate tribes of the Wyandots, and the earliest tribes once belonging to the same family. A. S. G.

*Aristides Rojas. Estudios Indígenas. Contribuciones a la historia antigua de Venezuela. Caracas: Imprenta Nacional, 1878. 8vo., 221 pages.*

The introduction to this work informs us that the author is engaged in various studies relating to his own country, and by the titles of his productions we conclude that the ancient and modern history of Venezuela is mainly occupying his attention. The first subject treated in this volume are the rock sculptures of San Estéban, of the Coast Range, of the shores of the Orinoco and Essequibo Rivers, as well as of the Amazon; no designs of the sculptures themselves are contained in the volume. The author then discusses the geological myths of the Muyscas and Tamanacas, gives a historic sketch of the Carácas peninsula (Indian, Spanish and republican period), in which we may find many notices available for science; treats of the various Indian names for Divinity, heaven, etc., of the syllable *gua* or *hua* occurring in so many South American languages in the shape of a prefix (pronounced *wa*, *ua*, *u-a*), on the terms for *water*, *river*, etc., and on the literature of the native languages spoken throughout Venezuela. The bibliography added to this article makes it one of the most useful of the whole book, and the thirteen specimens of the Lord's Prayer give us at least some idea concerning the phonetics of the languages spoken in South America, north and west of the Orinoco river. Unfortunately the author is an adherent of the idea that America was peopled by Phœnicians, Hindus, or Europeans, a few centuries before Christ, and this destroys in us to some extent the good impressions left by the industry and scientific zeal shown by this Venezuelan author. A. S. G.



Bleek, W. H. I., Dr. Phil. *A brief account of Bushman folk-lore and other texts.* Capetown: 1873-1875. London: Trübner & Co. fol. (the second part has 21 pages).

Of this publication the second official report on "Bushman Researches, with a short Account of the Bushman Native Literature Collected," contains a series of most instructive extracts from Bushman myths, legends, histories, songs, not in the Bushman original, but in English. Not less than 113 ethnologic texts were thus collected, and many of the myths show analogy with Hottentot myths. There are, moreover, 12 word lists and other manuscripts on the language of the Bushmen. The extracts given are of a most attractive character, and we therefore wish most earnestly that the Bushman texts preserved in the Grey Library, at Capetown, may be published at an early date, with an intelligible English rendering. According to the Bushman folk-lore, the sun was once a man, living on earth, and brightness proceeded from his armpit. Similar myths were met with among the Australians. Originally the moon was to some Bushmen a piece of leather; to others it was a man, who incurs the wrath of the sun, and is consequently pierced by the knife (*i. e.*, rays) of the latter. This process is repeated until almost the whole of the moon is cut away, and only a little piece left; this the Moon piteously implores the Sun to spare for his (the moon's) children. From this little piece, the moon gradually grows again, until it becomes a full moon, when the sun's stabbing and cutting processes recommence.

A. S. G.

The *Cincinnati Lancet and Clinic* of May 29, 1880, contains an interesting article from the pen of Dr. G. BRÜHL, on "The Precolumbian Existence of Syphilis on the Western Hemisphere." Two passages in Oviedo's *Historia de las Indias* had been heretofore the only evidence on which the theory of the importation of syphilis from America into Europe was resting. Dr. Brühl succeeded in finding more passages of the same import in Las Casas, Ximenez (a Guatemalan friar), Hernandez (a physician of Philip II.), Mendieta, Gomara, etc. The existence of a large number of anti-syphilitic remedies among the natives of Central America and Peru, as well as the peculiarly diseased condition of the bones of mound-builders recently found in Tennessee and Kentucky also tend to prove precolumbian existence of syphilis in this hemisphere. This is a conclusion on which the author dwells forcibly; he thinks it probable that the disease spread in Europe during the first year after Columbus' return from his first voyage, but does not deny that virulent forms of syphilis can originate *anywhere* spontaneously, and were observed in Asia long before Columbus.

BEITRÄGE ZUR ANTHROPOLOGIE UND URGESCHICHTE BAYERNS. München, 1880. 4°. (Edited by Prof. Joh. Ranke and Nic. Rüdinger.) Illustrated.

The second number of the third volume of this periodic publication contains a bulk of very accurate and statistical information on prehistoric finds made in Bavaria (exclusive of the Bavarian Palatinate), compiled by Prof. Ranke. To this is added a description of the treasures exhibited in the public and private collections of seven provinces, an inquiry into the manufacturing process and the material of the stone weapons and other stone implements; the more characteristic of these implements being figured in five tables of illustrations. The other articles of this number treat: (a), of the German dialect of the Upper Palatinate; (b), of grave mounds dug up in the village of Niederambach; (c), on some malformations observed on the human occiput (by Dr. Hagen; illustrated.)

A Geographic and statistic gazetteer of the *Peruvian Territory* has been compiled by M. F. Paz Soldan, Lima, 1879. 1077 pages. This book is of interest to linguists, because it adds to many Indian local names their etymology from the Ketchua, Aimará or other dialects spoken by the natives.

*Tehuelche.* For the purpose of making ethnologic, zoologic and other researches, Ramon Lista has traveled through Southern Patagonia, from November, 1877, to March, 1878, starting from Punta Arenas, in the Straits of Magellan. Some notices concerning the Tehuelche language are contained in a short article of his, "Viage al Pais de los Tehuelches. Exploraciones en la Patagonia austral. Parte I," which is intended as a precursor to his larger report on the same subject.

A. S. G.

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